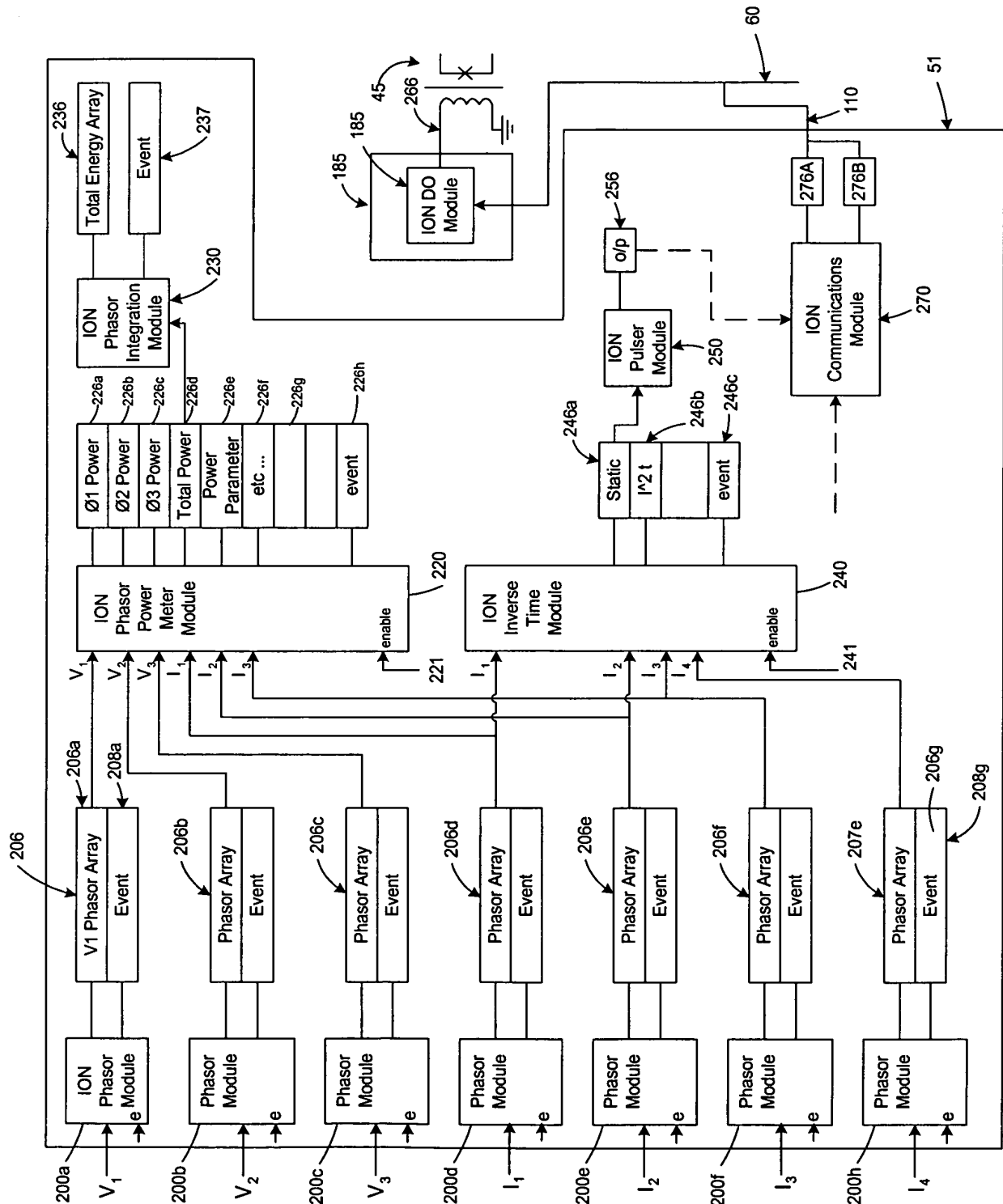


FIG. 2

Phasion ION Mouldle Diagram



The diagram illustrates a system for processing ION phasor data. The system is organized into several functional blocks and signal paths:

- ION Phasor Summation Module (306):** This central module receives inputs (15), (16), and (17). It performs the following functions:
 - time aligns input phasors
 - computes current sum for all phases
 - computes power product sums for all phases
 It outputs a series of signals: V^*_1, V^*_2, V^*_3 (labeled 306a, 306b, 306c), I^*_1, I^*_2, I^*_3 (labeled 306d, 306e, 306f), P_1^*, P_2^*, P_3^* (labeled 306g, 306h, 306i), Phase^* (labeled 306j), $+ \text{Seg } I^*$ (labeled 306k), $- \text{Seg } I^*$ (labeled 306l), $O \text{ Seg } I^*$ (labeled 306m), and Event (labeled 306n).
- Inverse Time Modules (310, 320):** These modules receive signals from the summation module and output I^*_1, I^*_2, I^*_3 (labeled 310a, 310b) and P_1^*, P_2^*, P_3^* (labeled 320a, 320b).
- Phasor Integration Module (330):** This module receives signals from the summation module and outputs Phase^* (labeled 330a, 330b).
- ION Current Differential Module (340):** This module receives signals from the summation module and outputs V^*_1, V^*_2, V^*_3 (labeled 340a, 340b, 340c, 340d).
- Pulsar Module (350):** This module receives signals from the summation module and outputs I^*_1, I^*_2, I^*_3 (labeled 350a, 350b, 350c).
- ION Comm Module (280):** This module receives signals from the Pulsar Module and outputs a signal to the ION Comm Module (labeled 280).

* denotes phasor value

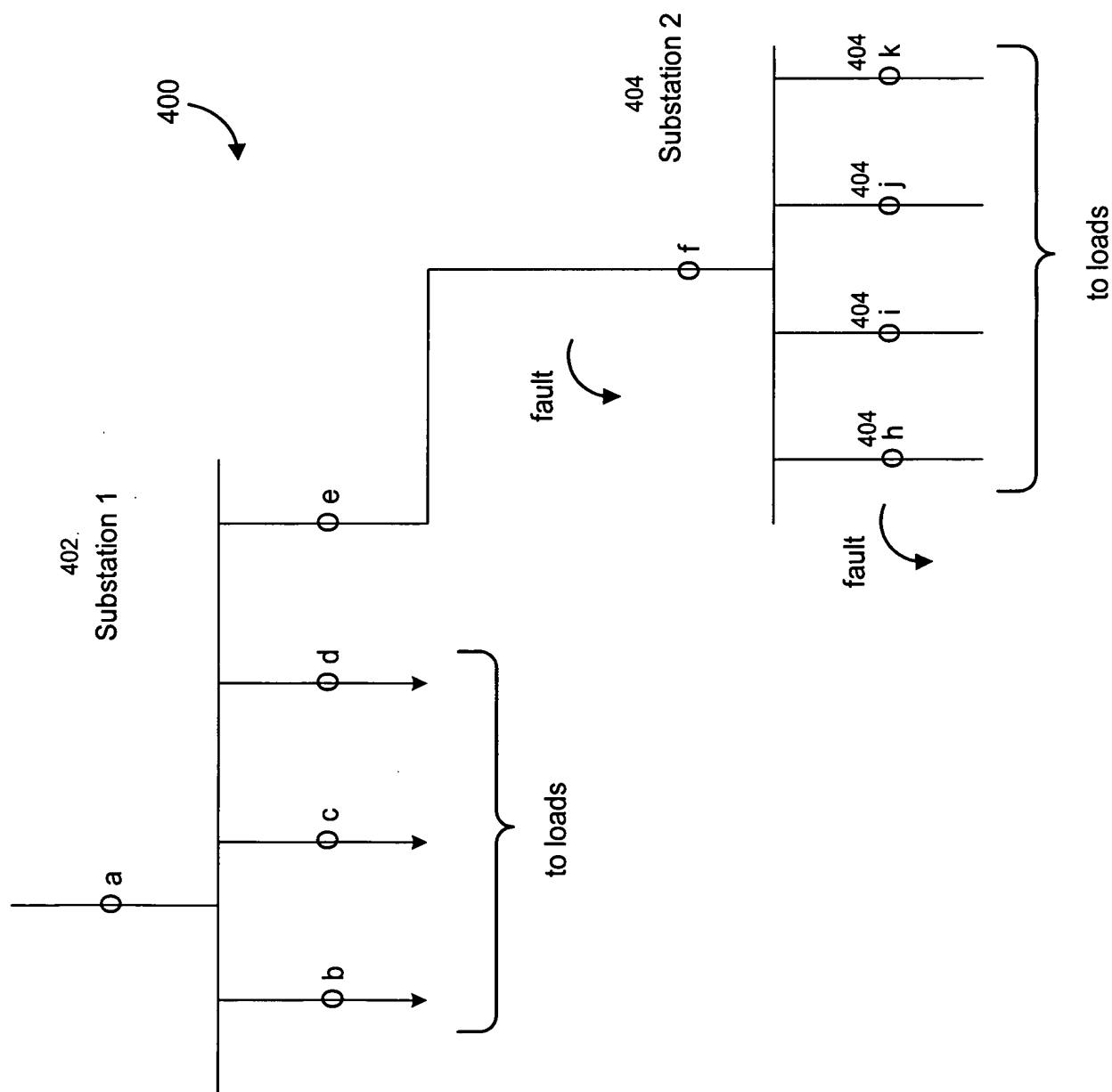


FIG. 5

FIG. 6

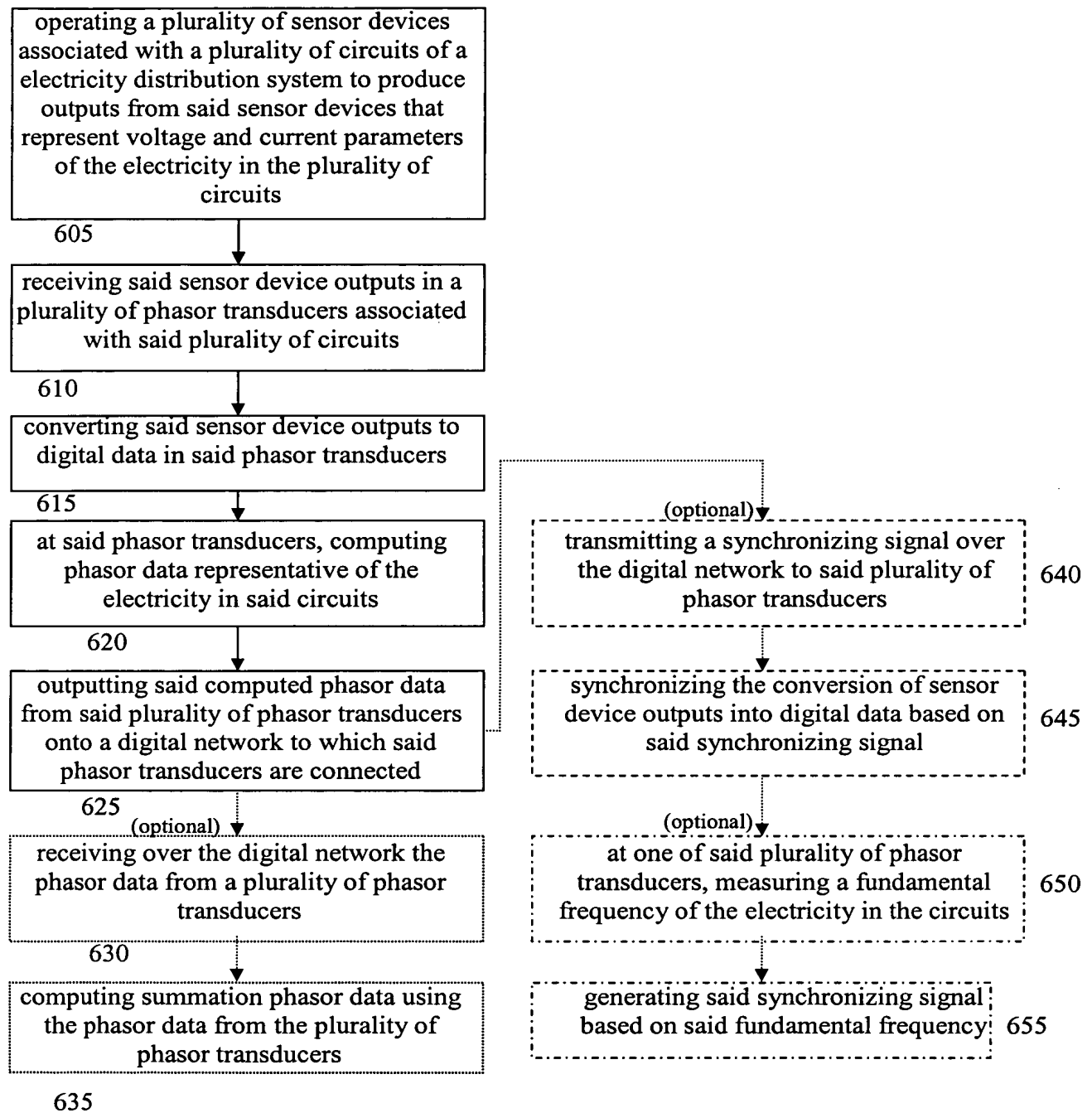


FIG. 7

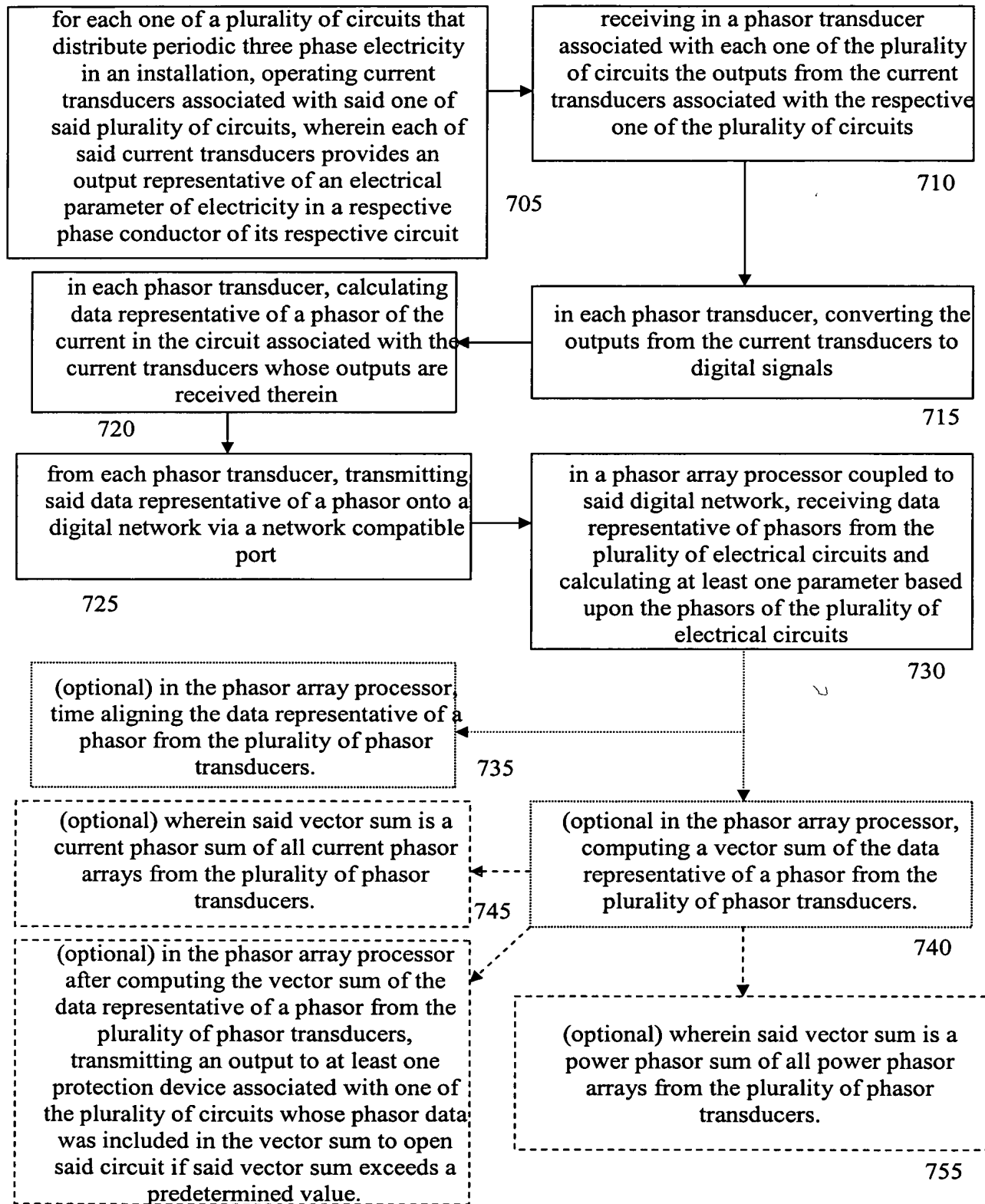


Diagram 916 illustrates a hierarchical network structure. At the top level, a 'VIED' block is connected to a 'PC' block via a line labeled 915. This 'PC' block is connected to a 'D' block (labeled 804) and two 'M' blocks (labeled 920). The 'D' block (804) is connected to a vertical chain of 'IED' blocks, with the bottom one labeled 900. The first 'M' block is connected to a vertical chain of 'IED' blocks, with the bottom one labeled 900. The second 'M' block is connected to a vertical chain of 'IED' blocks. A horizontal line labeled 916 connects this 'PC' block to another 'PC' block, which is connected to two 'D' blocks. Each 'D' block is connected to a vertical chain of 'IED' blocks. Ellipses indicate additional components in the network.

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DATA ACQUISITION MODULE

V1 SAMPLES (NA REG)

V2 SAMPLES (NA REG)

V3 SAMPLES (NA REG)

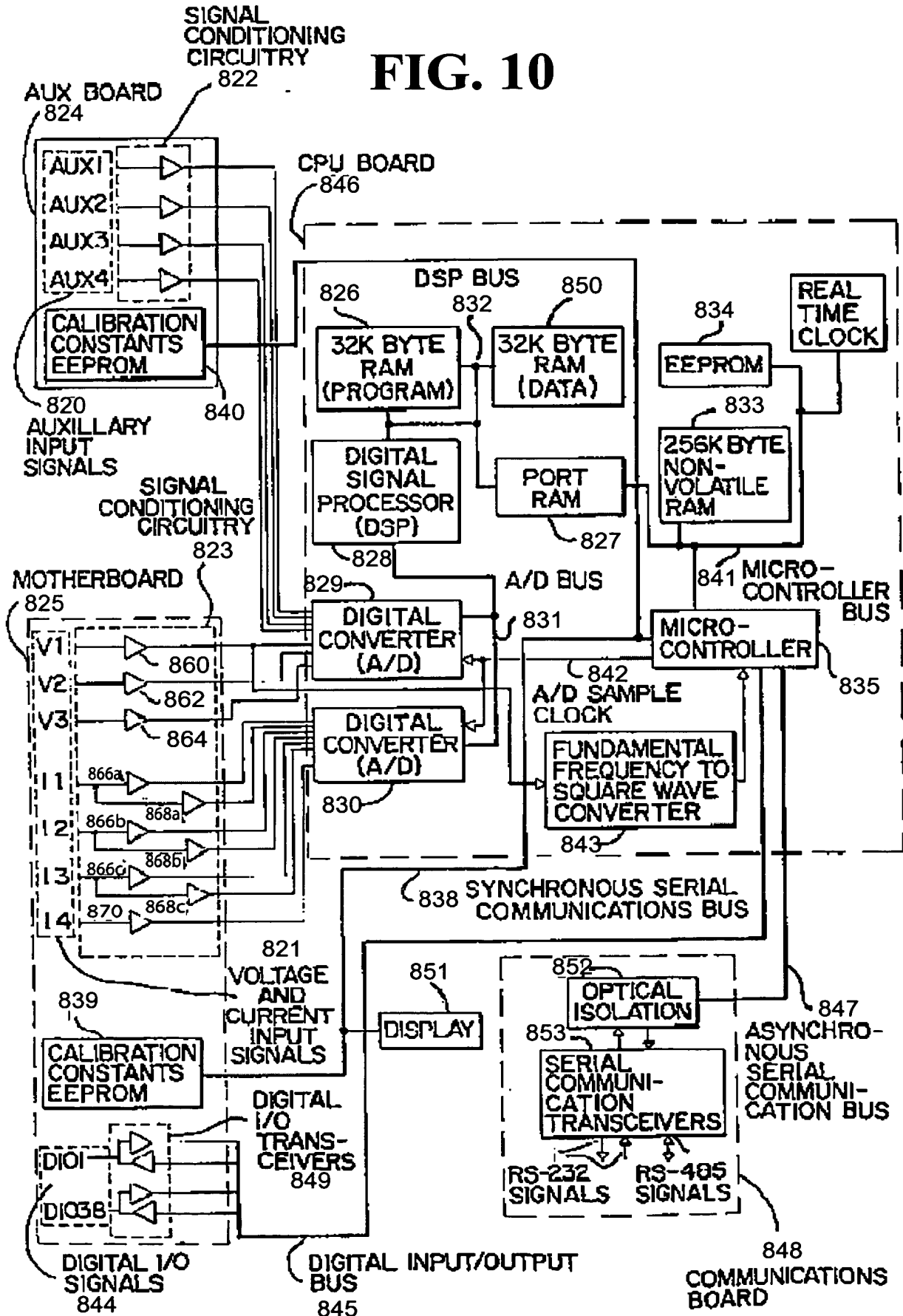
I1 SAMPLES (NA REG)

I2 SAMPLES (NA REG)

I3 SAMPLES (NA REG)

I4 SAMPLES (NA REG)

FIG. 10



DATA ACQUISITION
MODULE
OPERATION (CLIENT
PORTION)

FIG. 11A

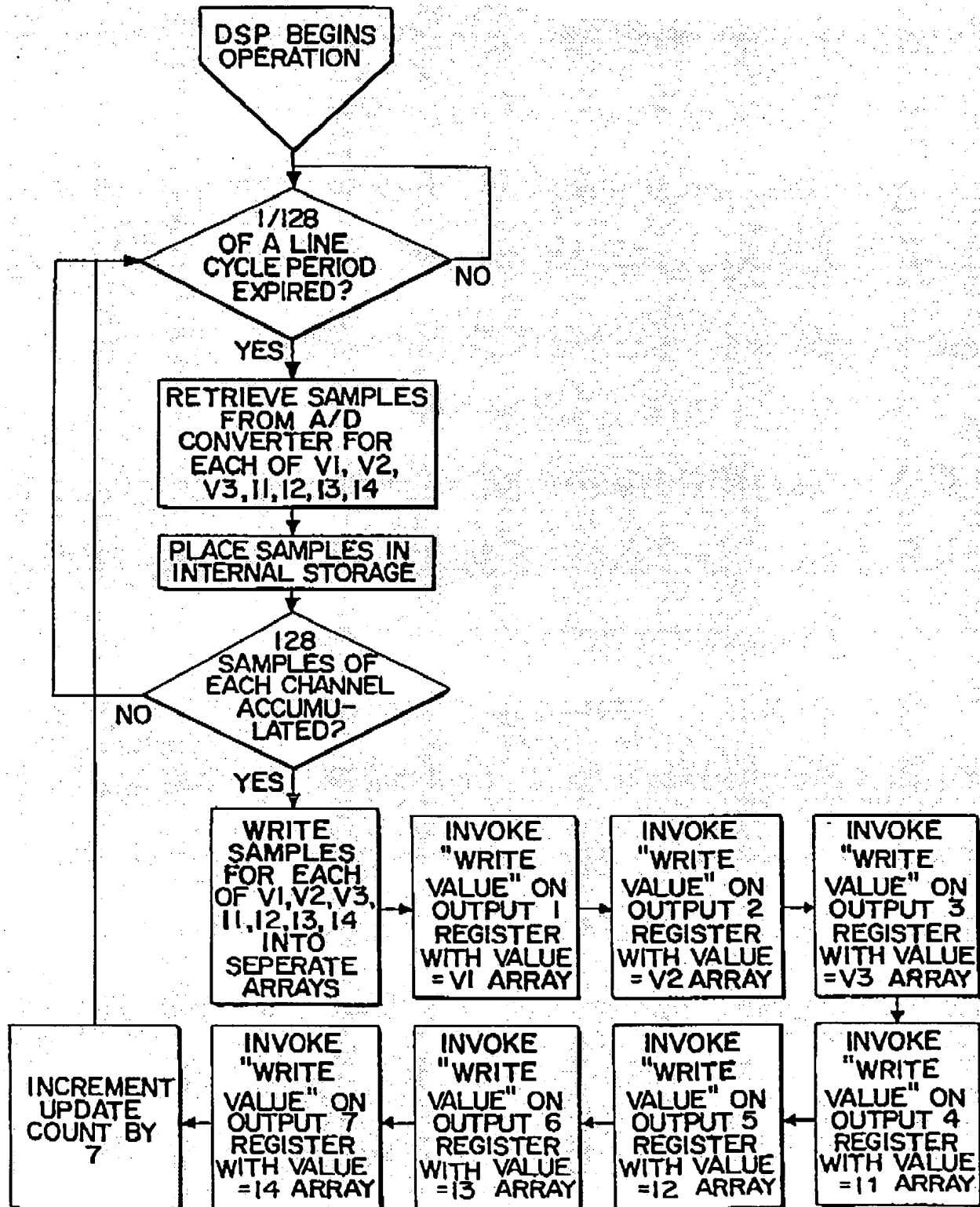
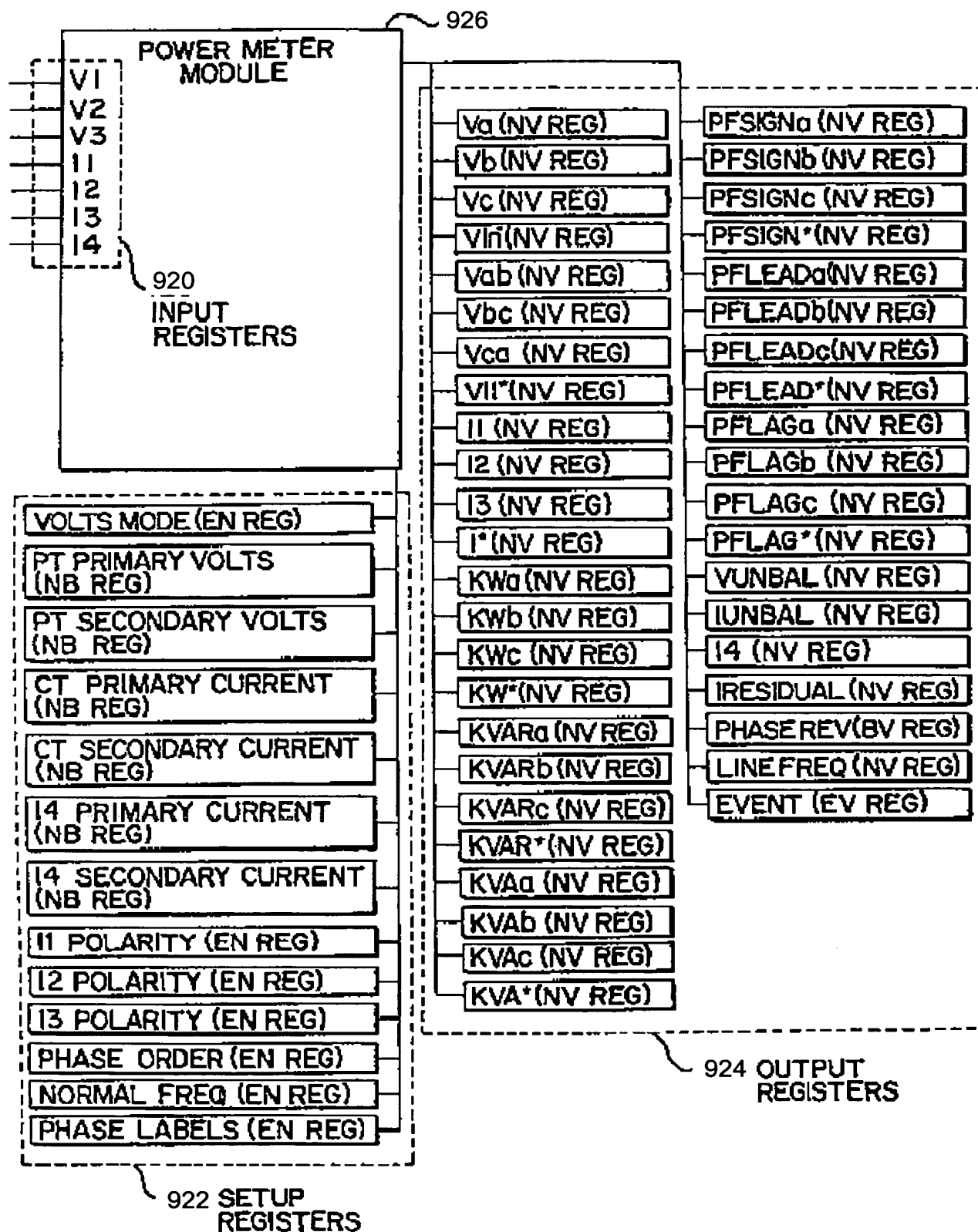
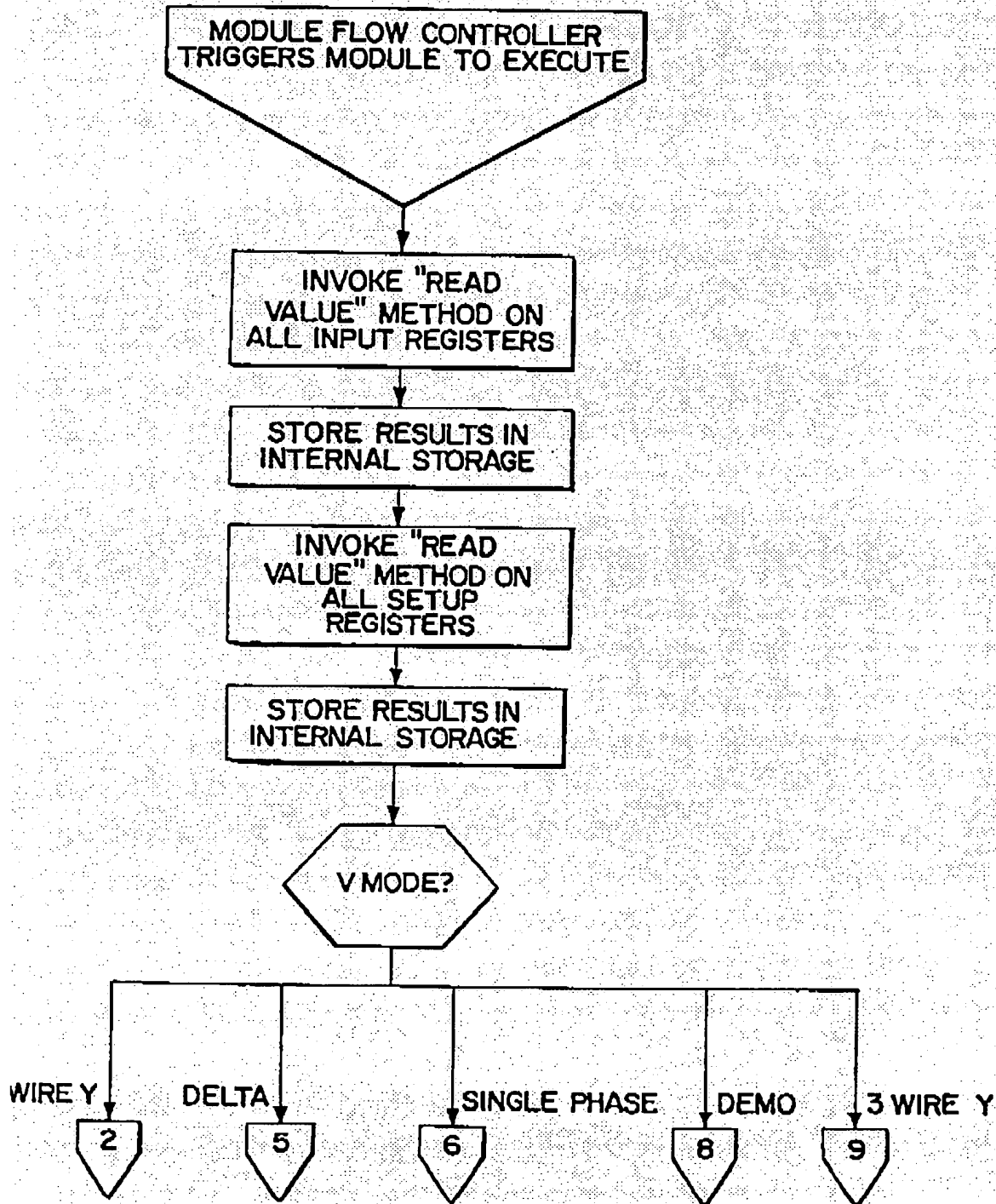


FIG. 12



POWER METER
MODULE
OPERATION
(CLIENT PORTION)

FIG. 12A



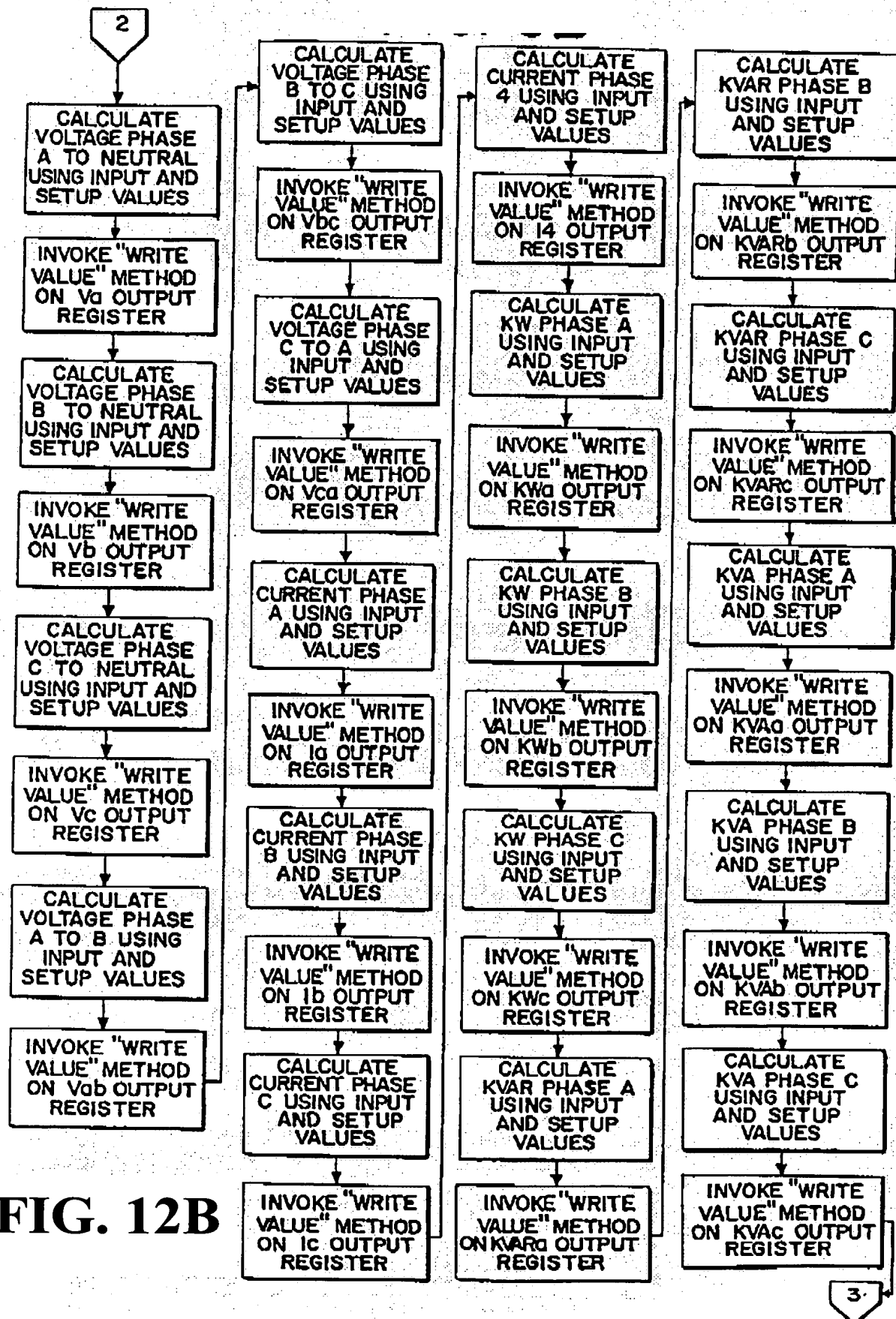


FIG. 12C

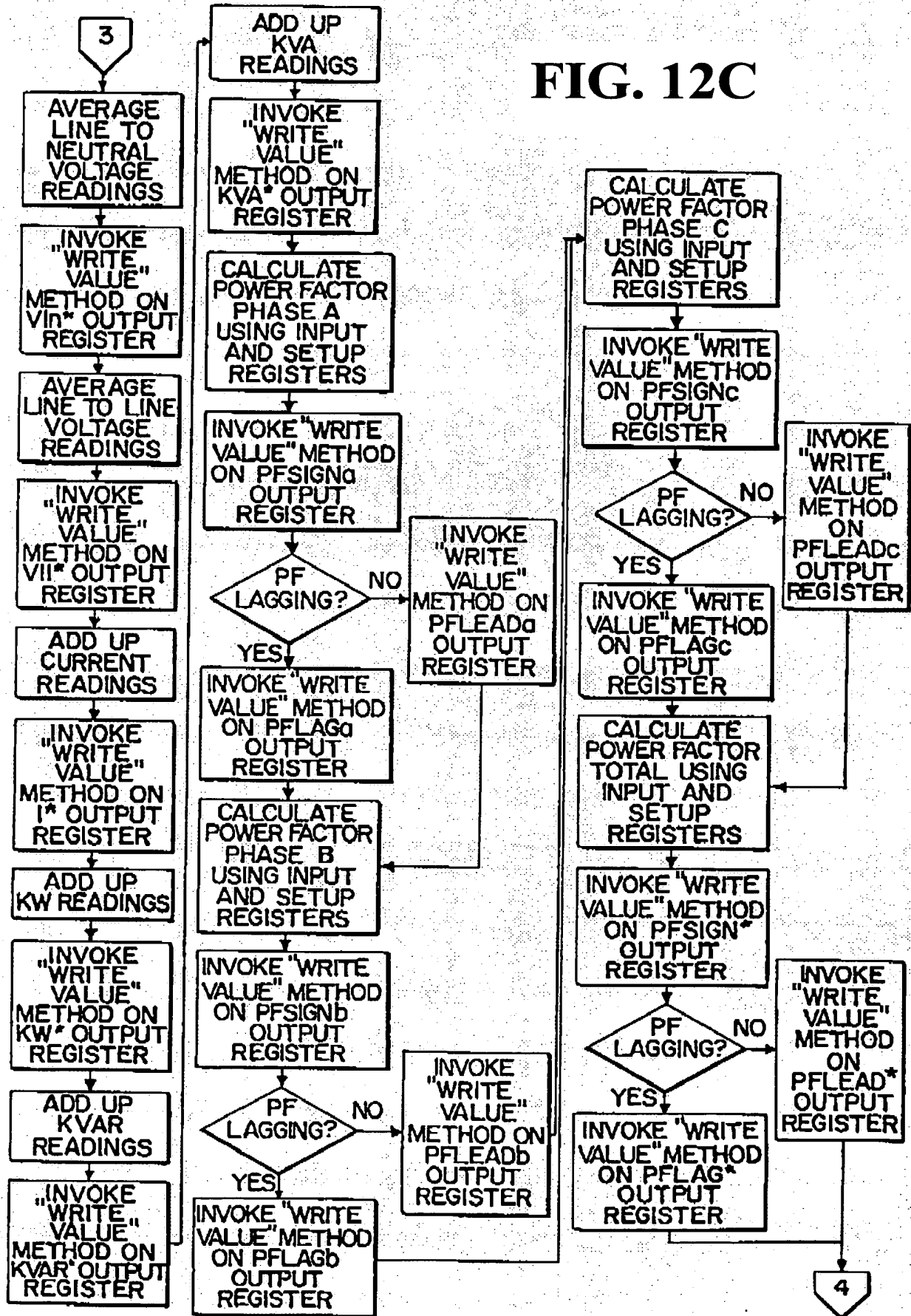


FIG. 12D

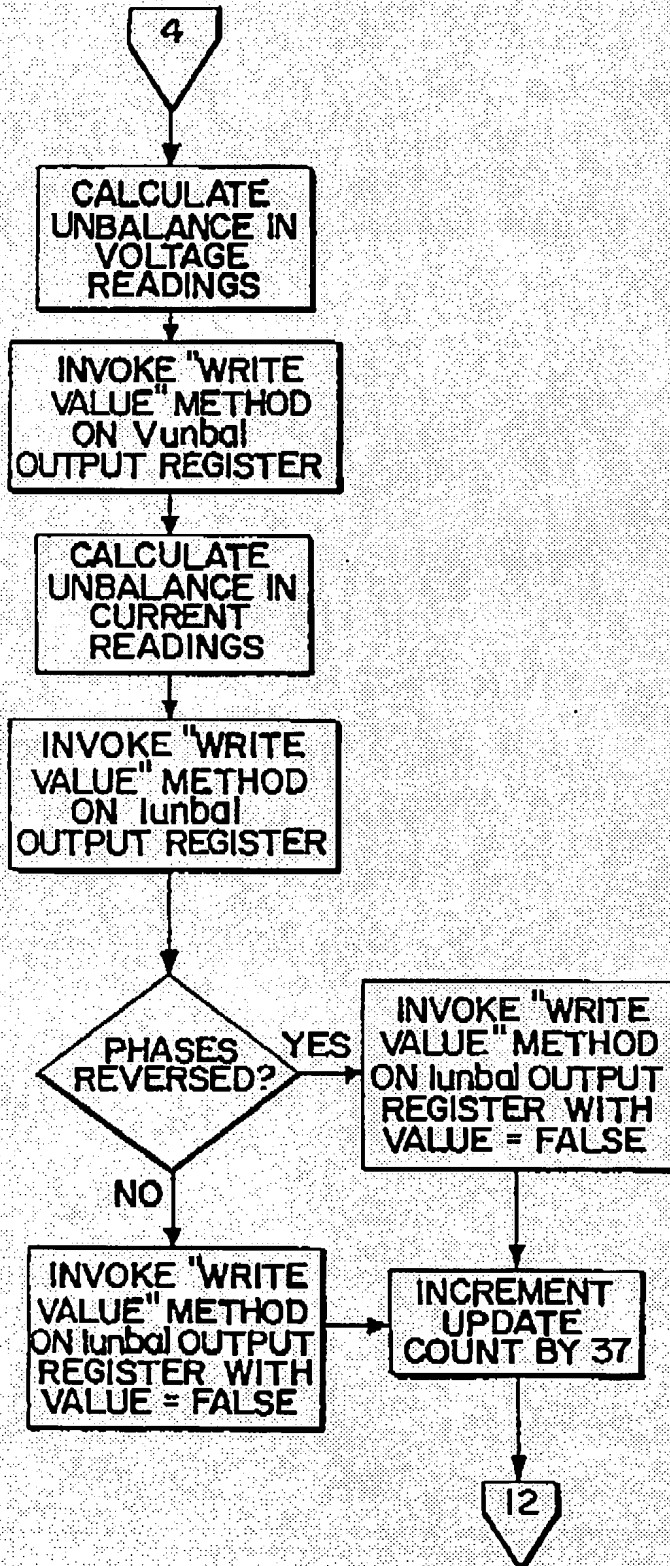


FIG. 12H

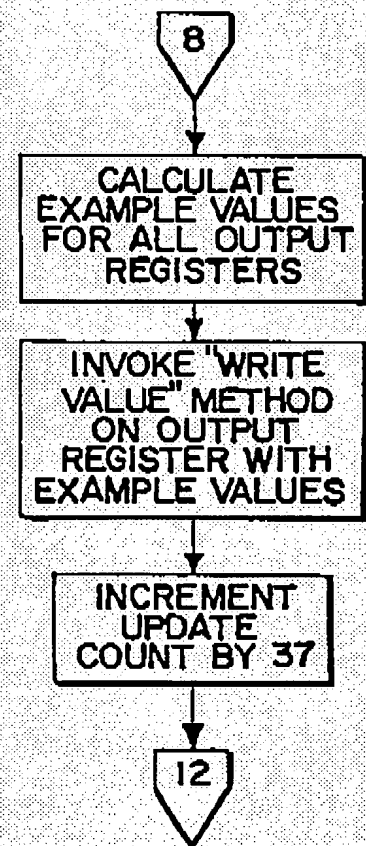


FIG. 12E

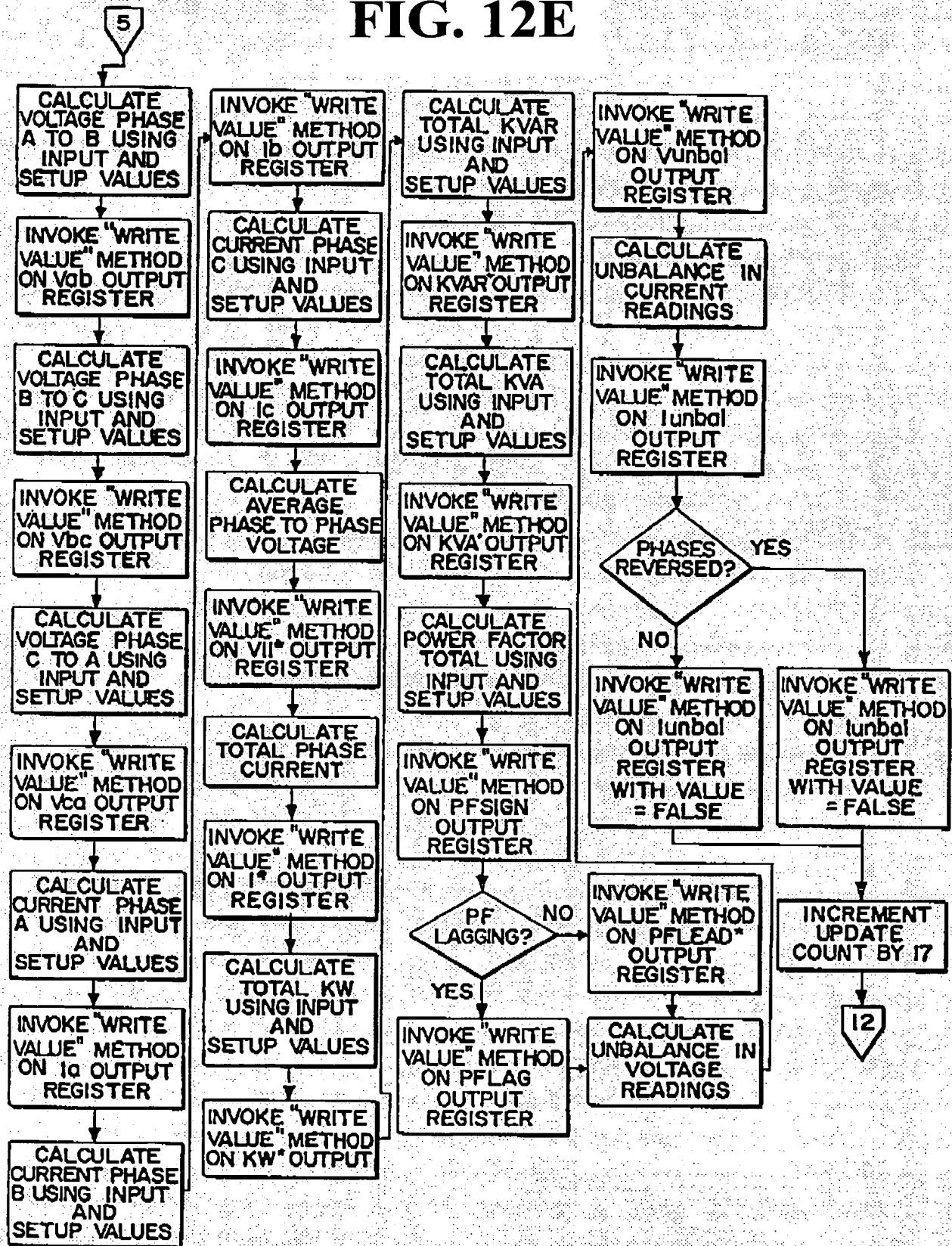


FIG. 12F

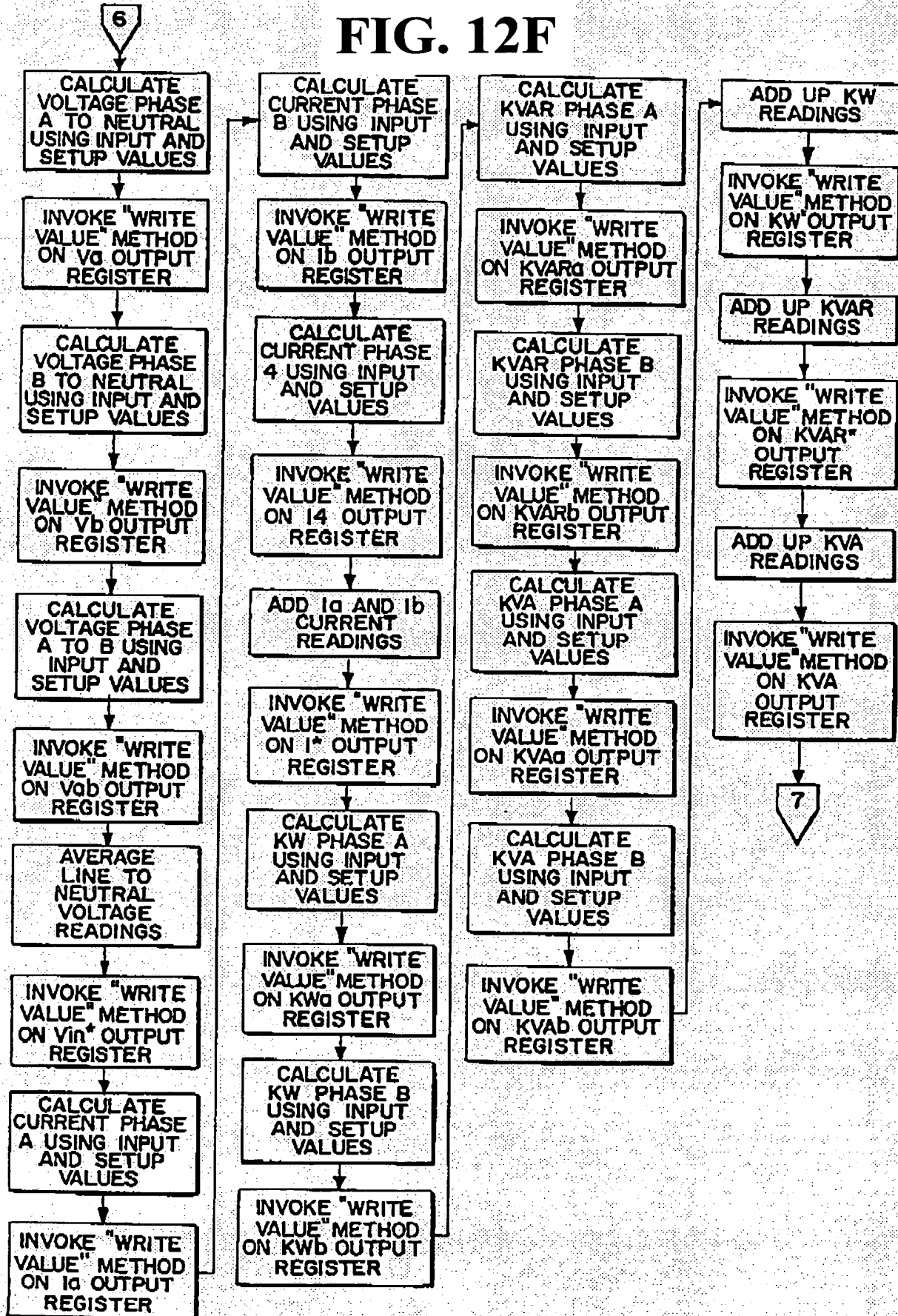
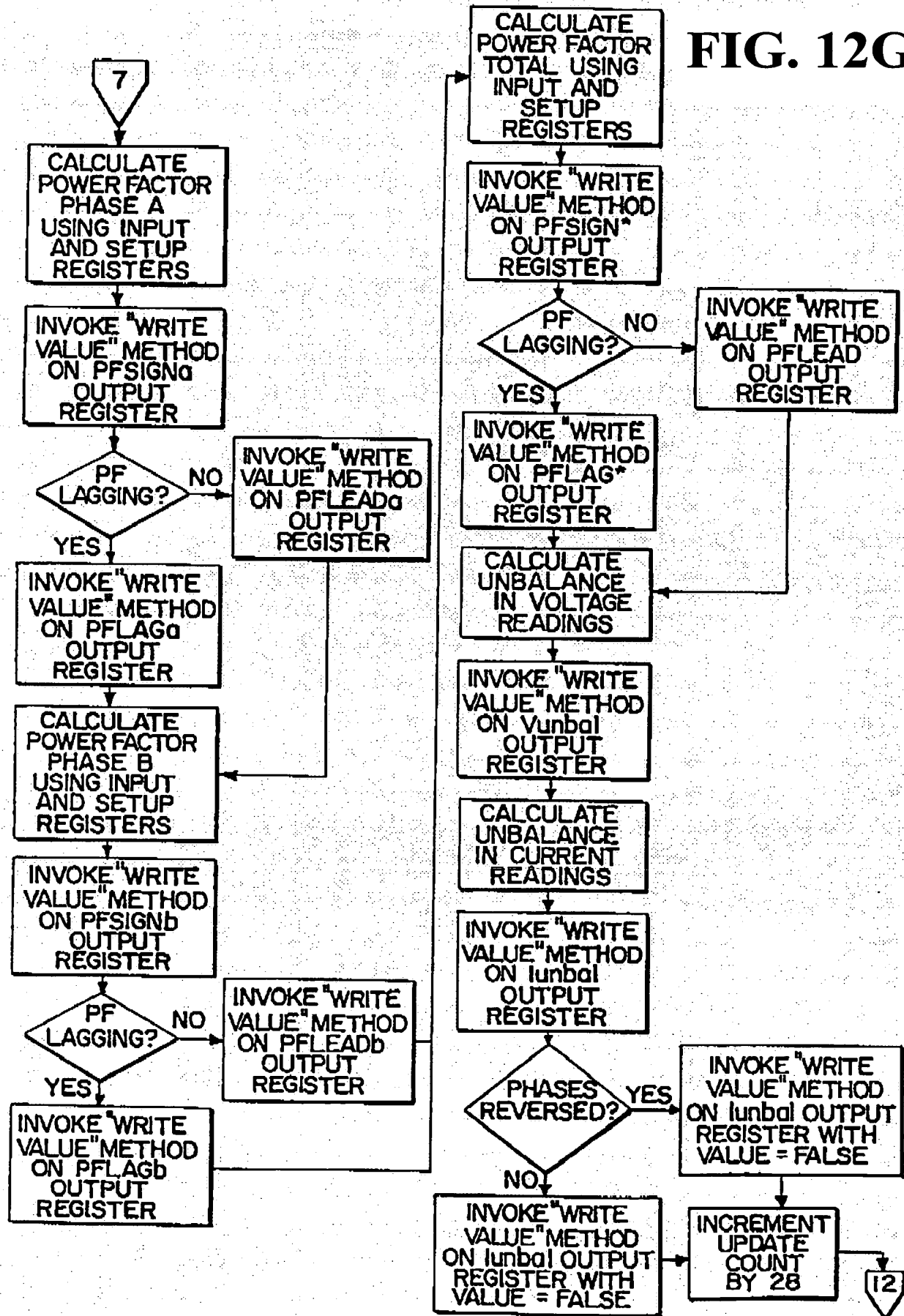


FIG. 12G



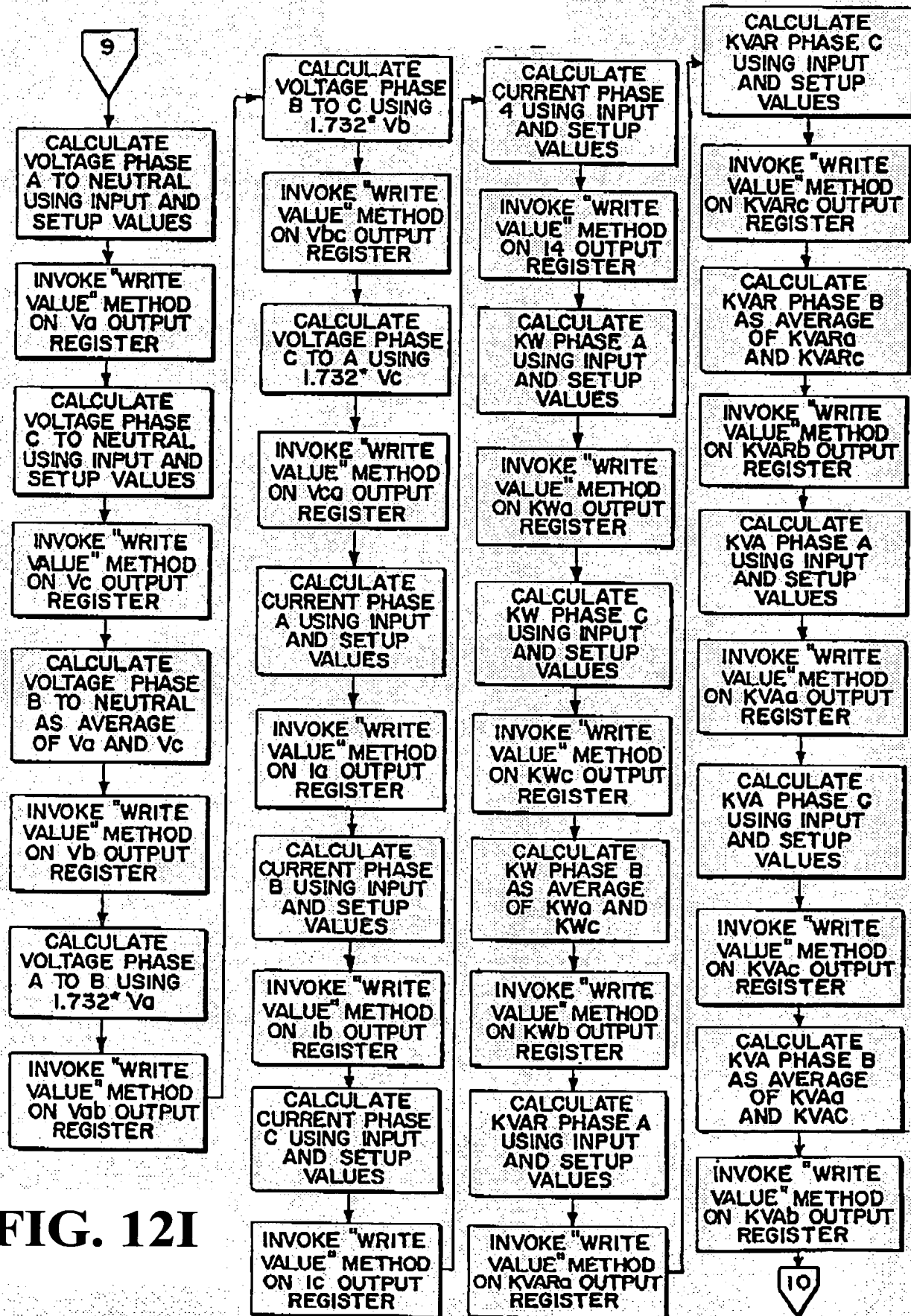


FIG. 12I

FIG. 12J

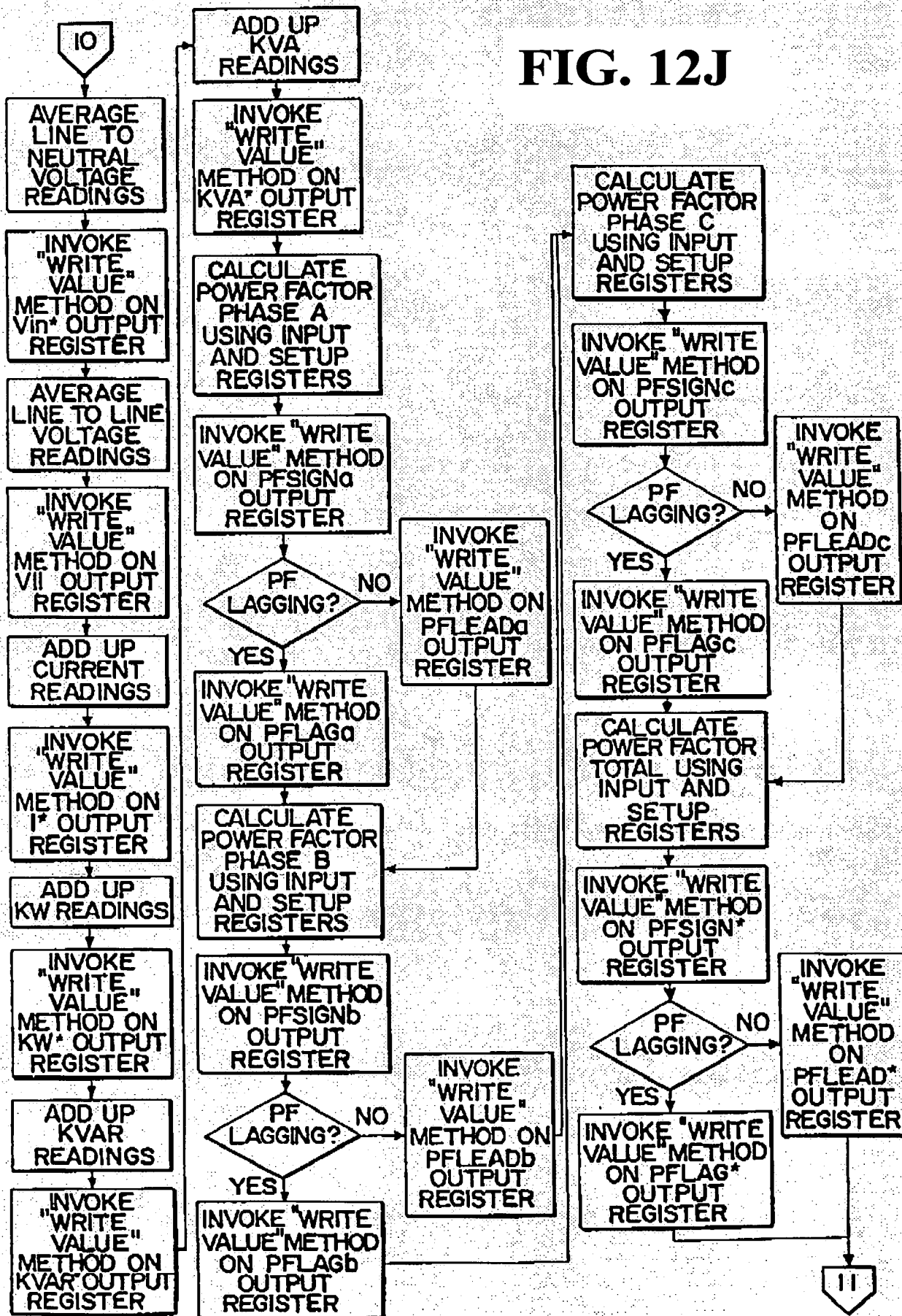


FIG. 12K

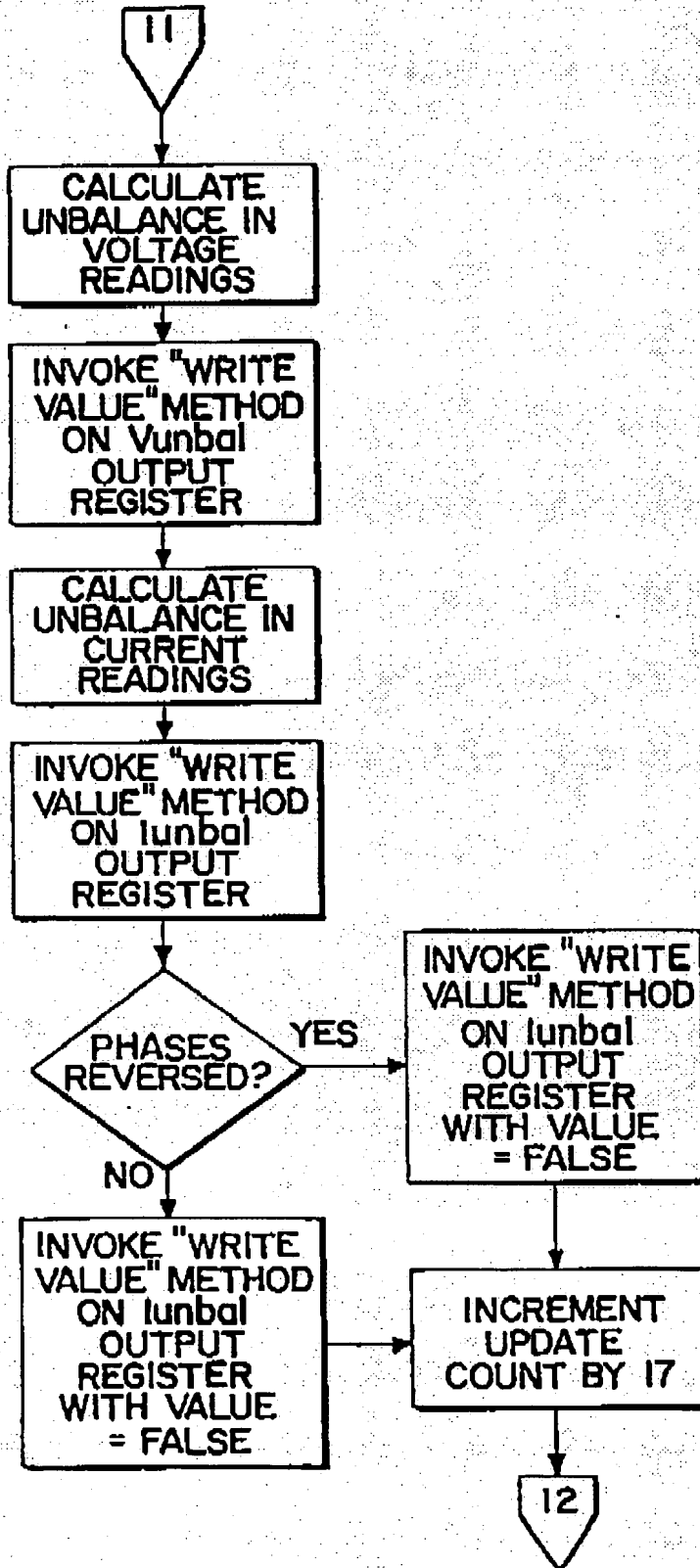


FIG. 12L

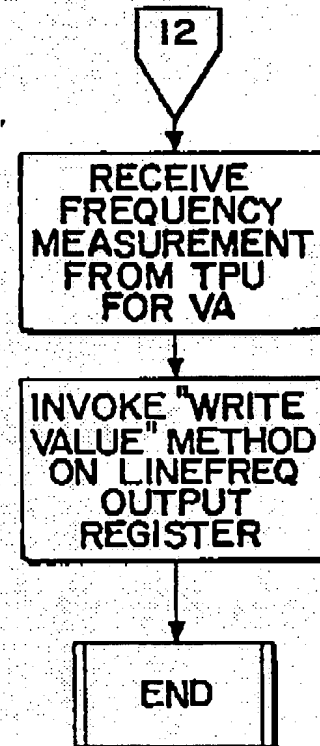


FIG. 13

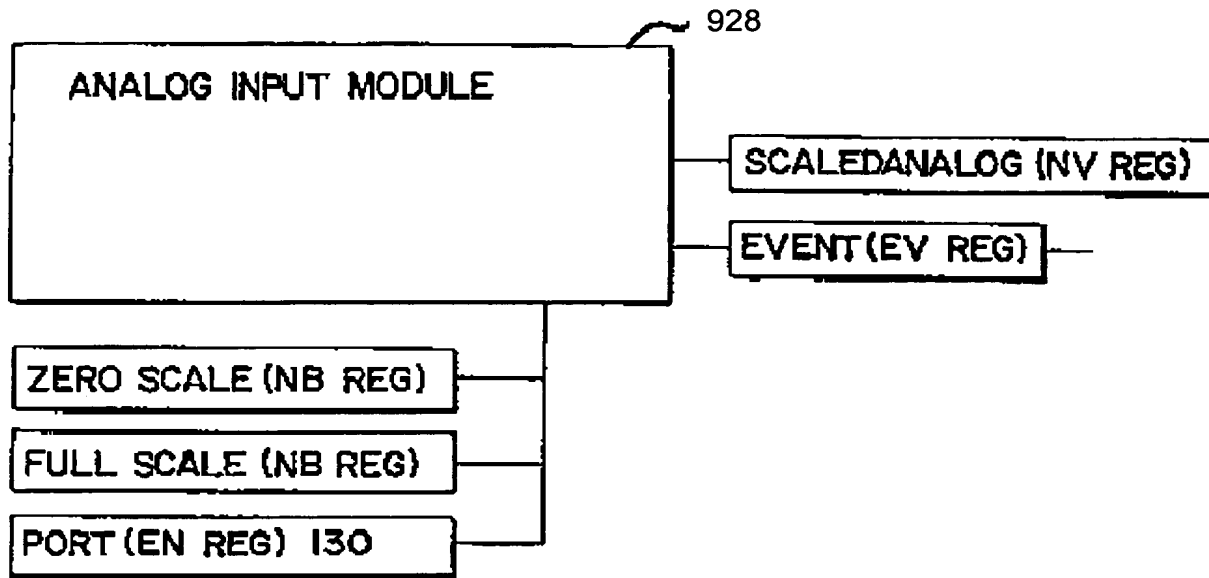


FIG. 14

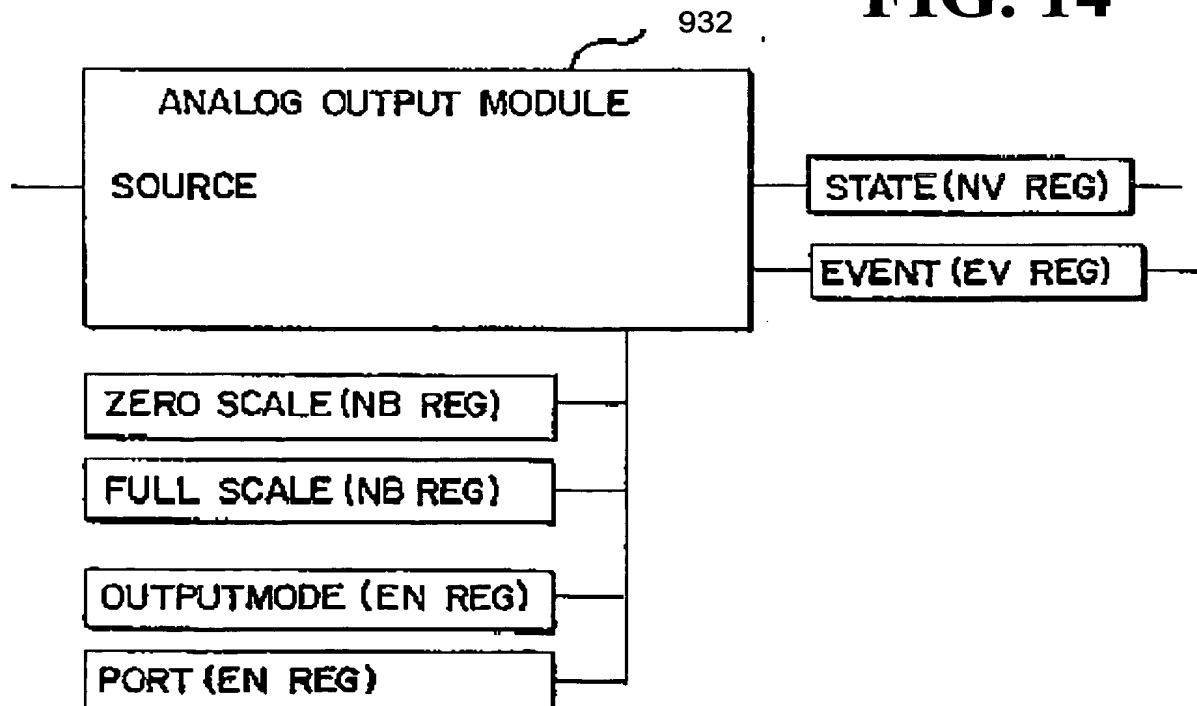


FIG. 13A

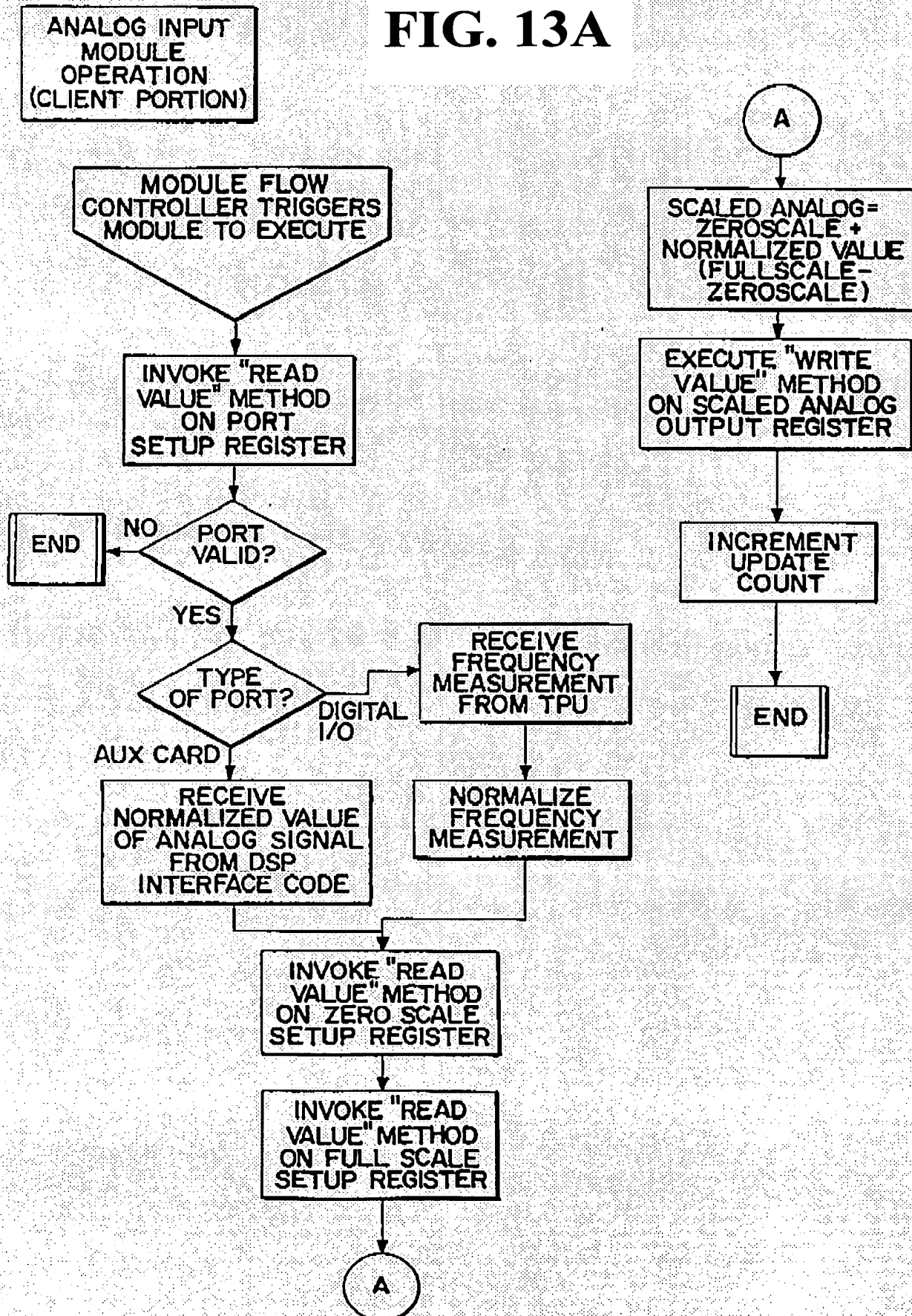


FIG. 14A

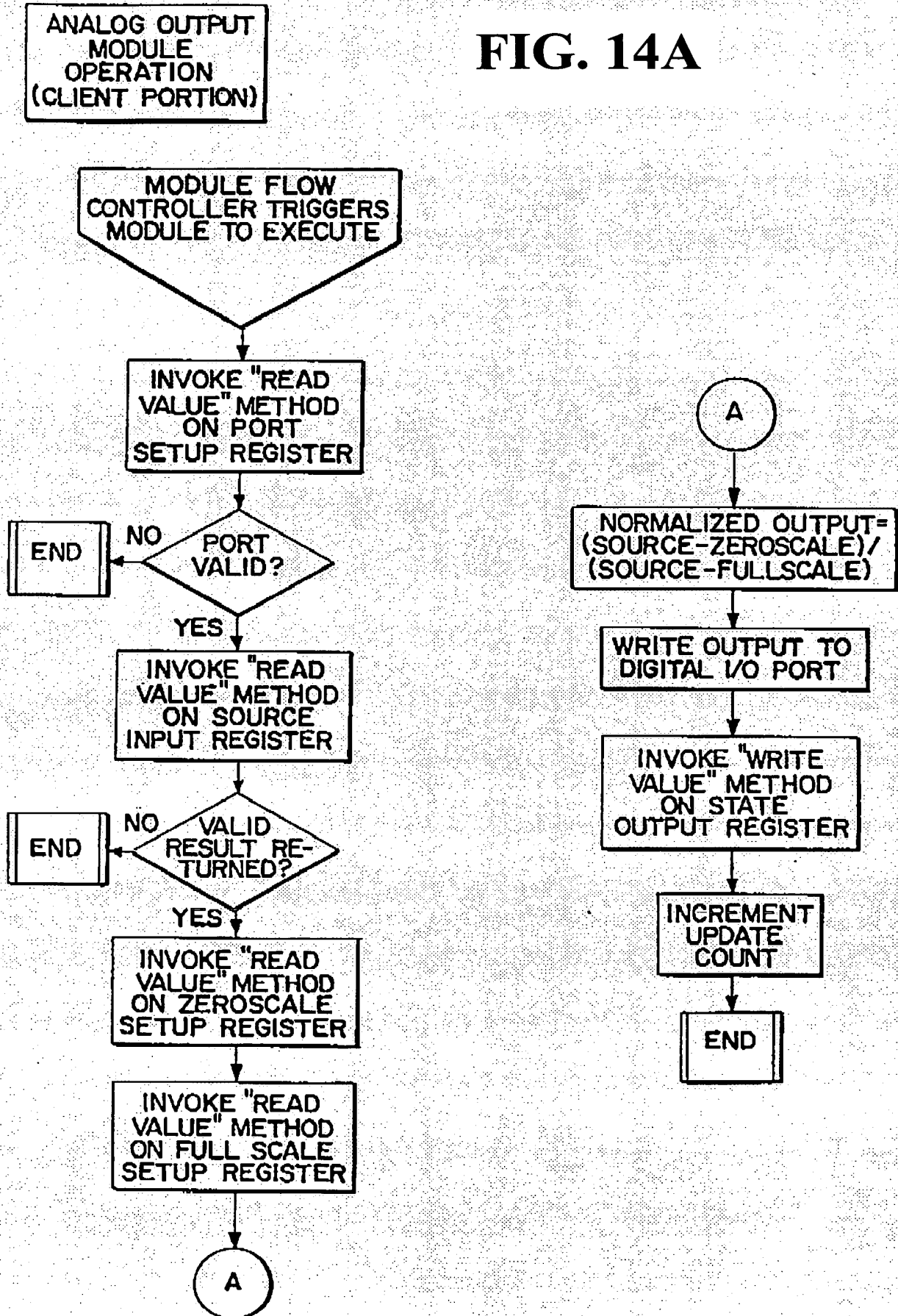


FIG. 15

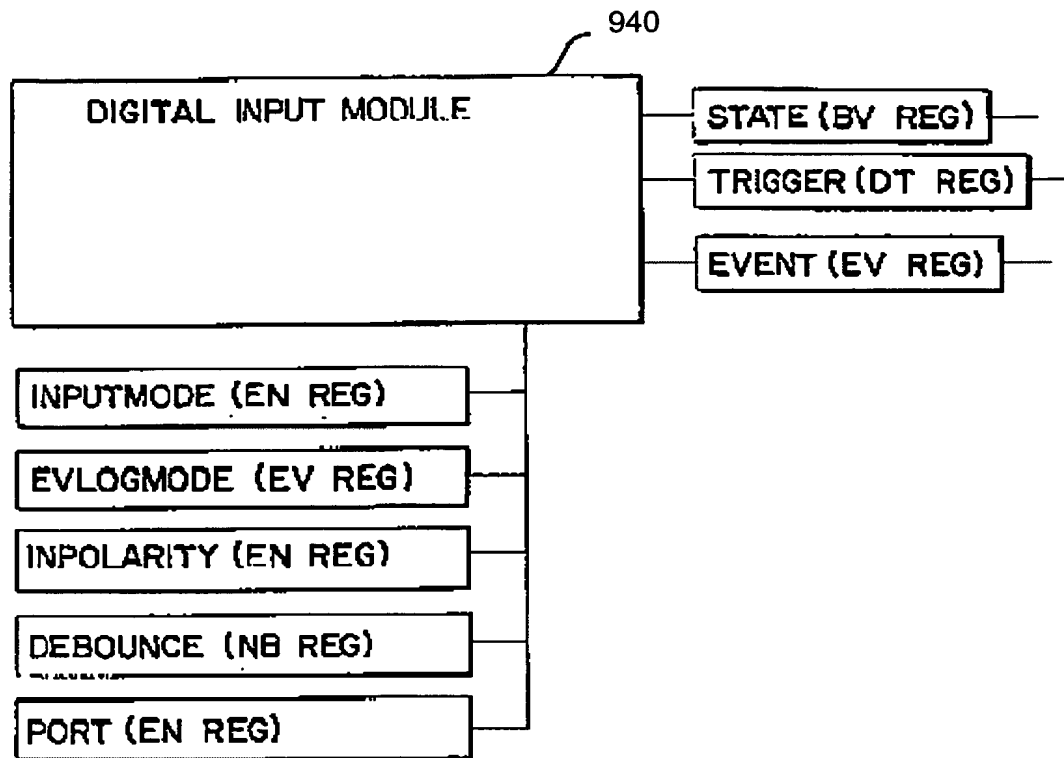


FIG. 16

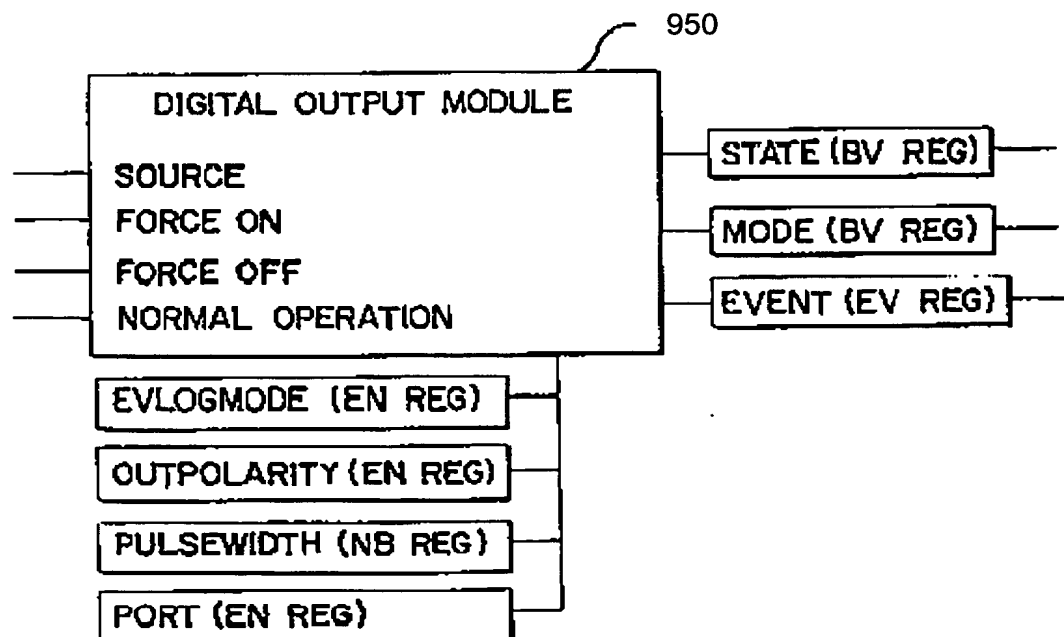


FIG. 15A

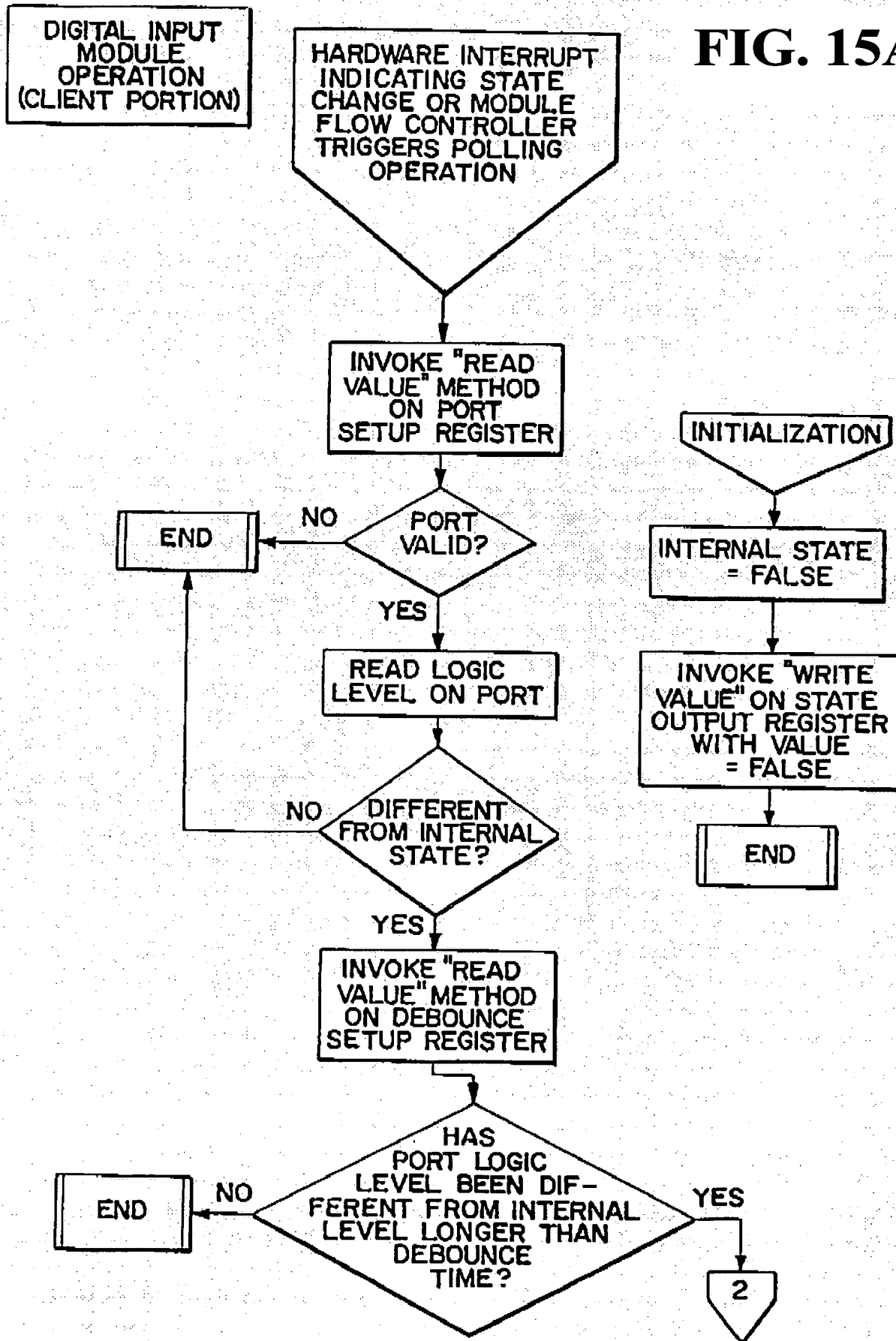


FIG. 15B

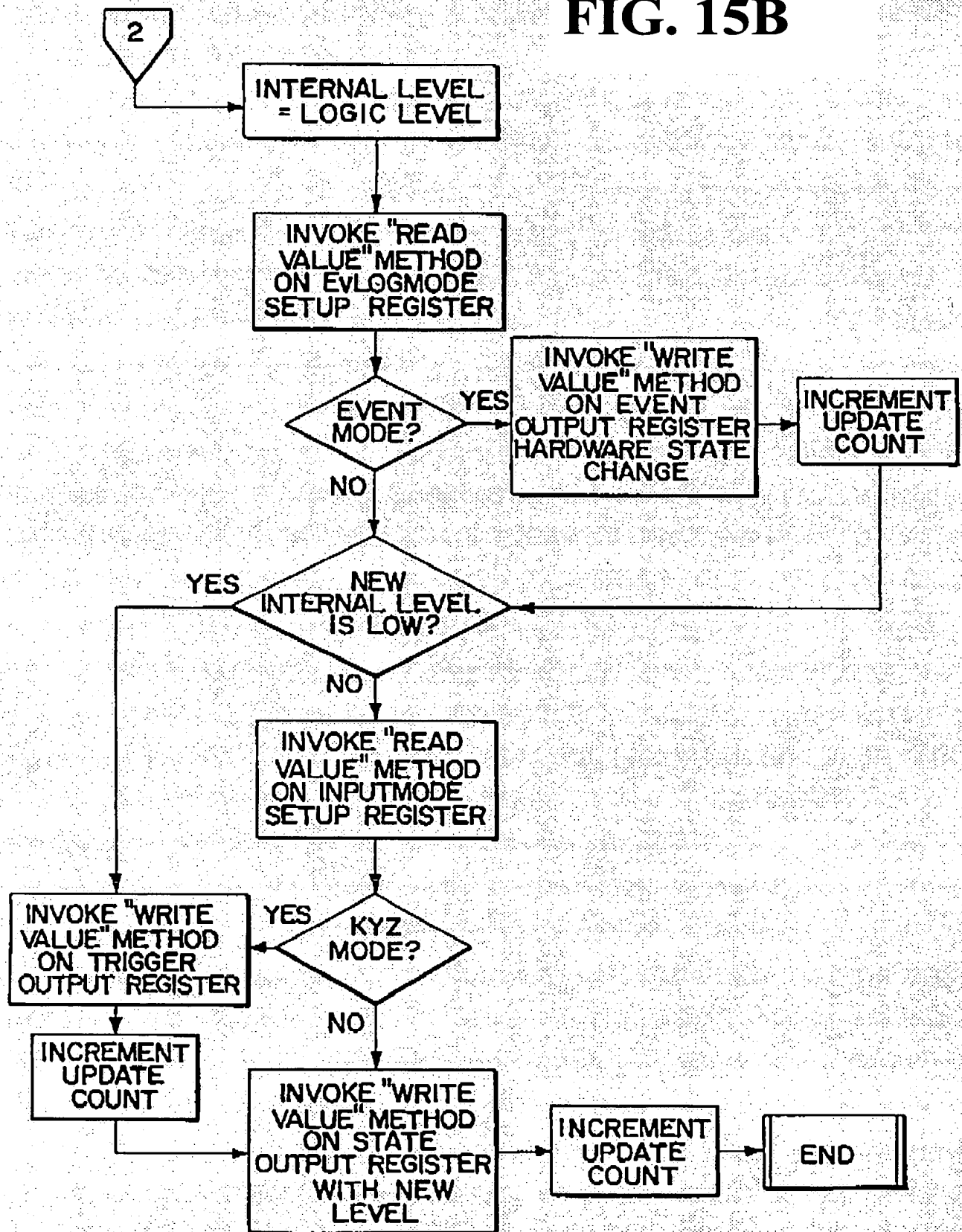


FIG. 16A

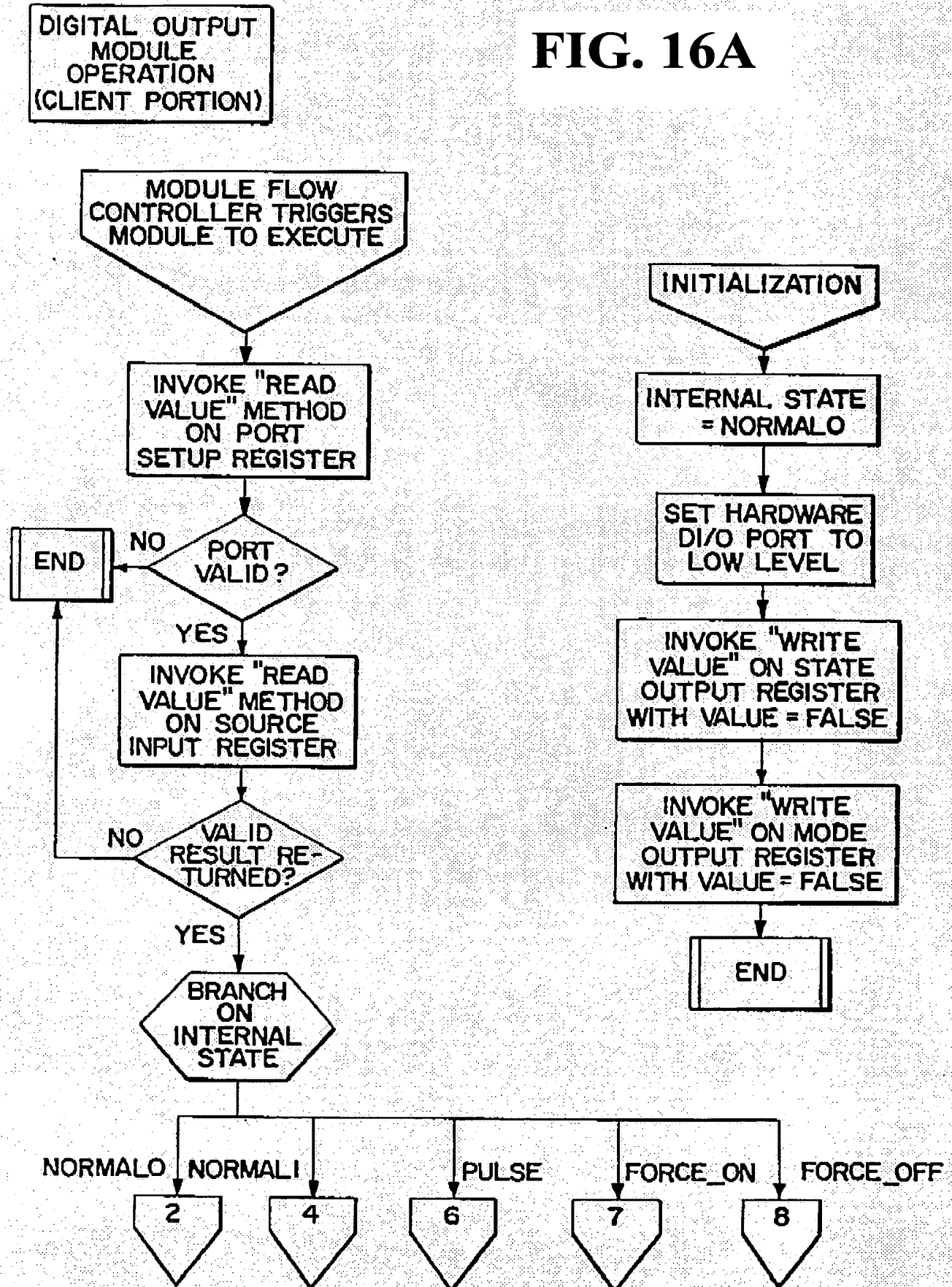


FIG. 16B

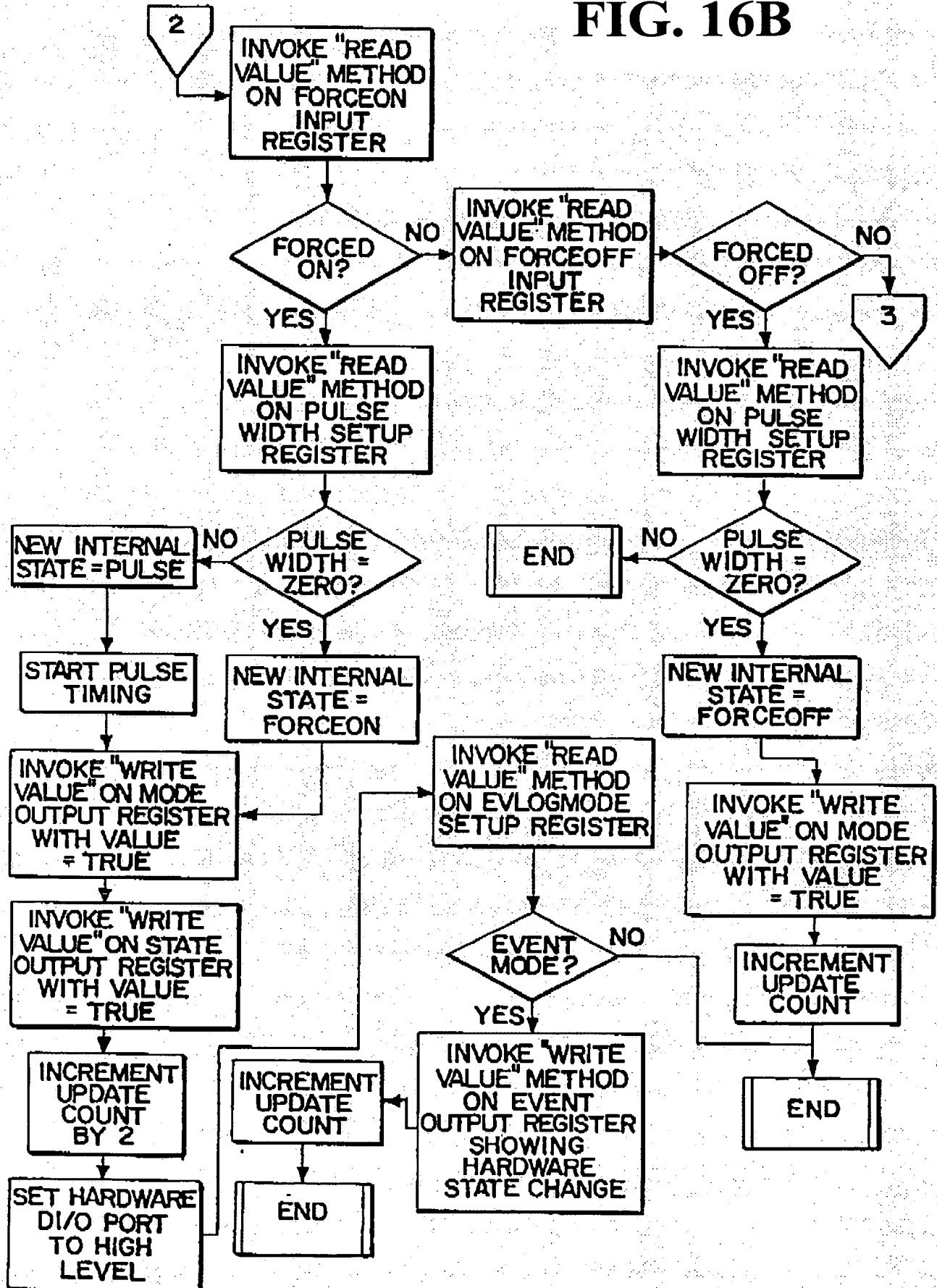


FIG. 16C

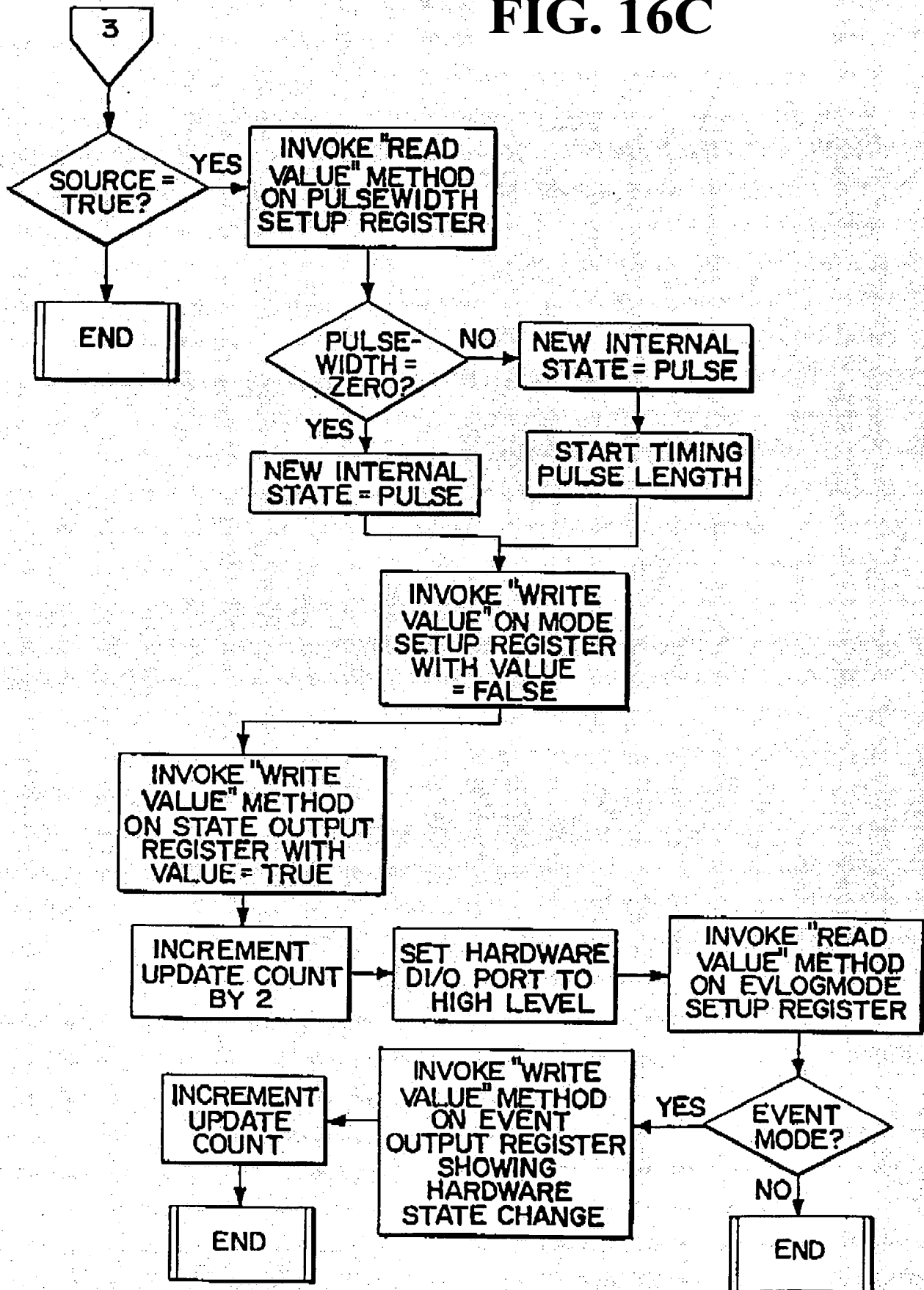


FIG. 16D

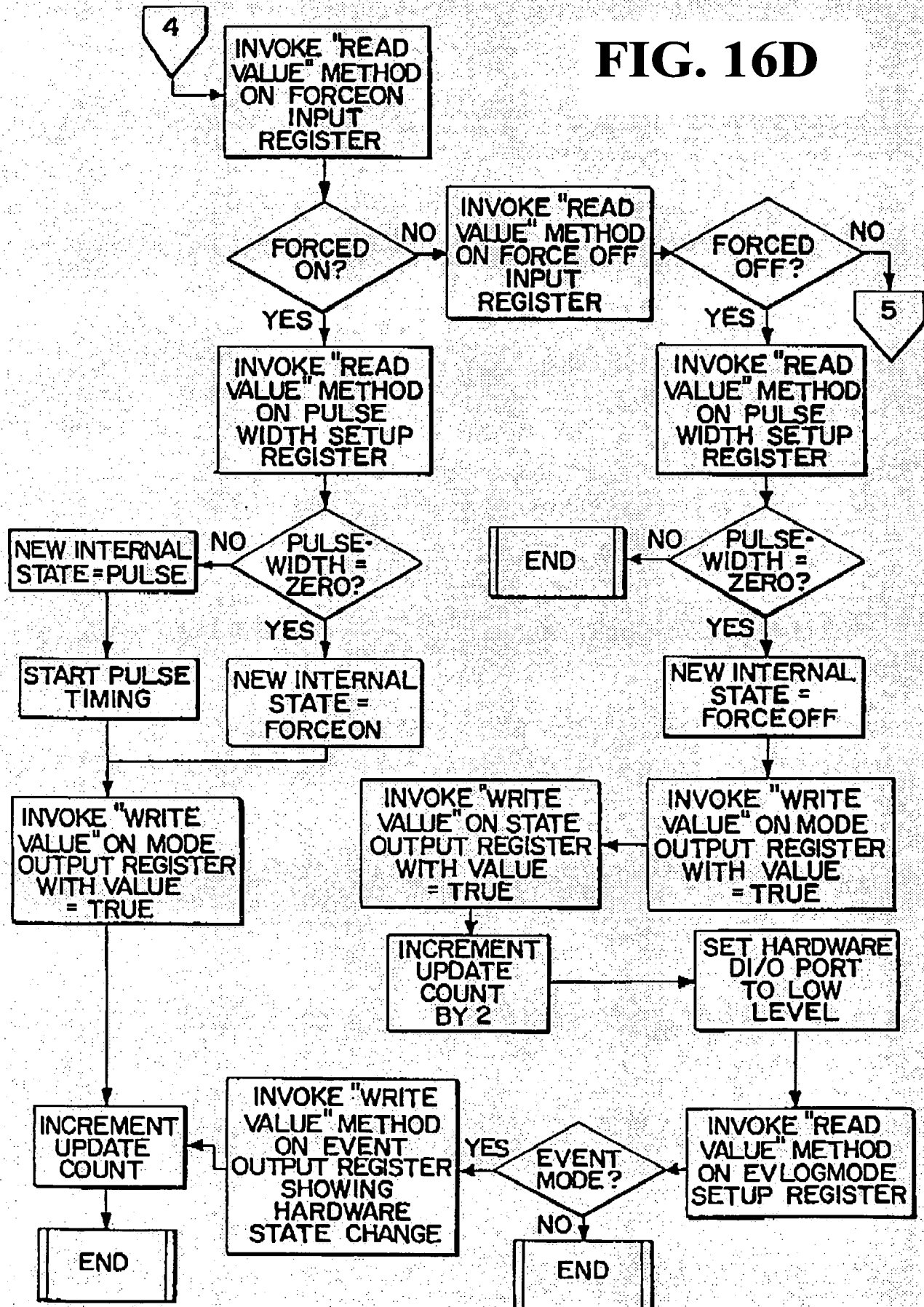


FIG. 16E

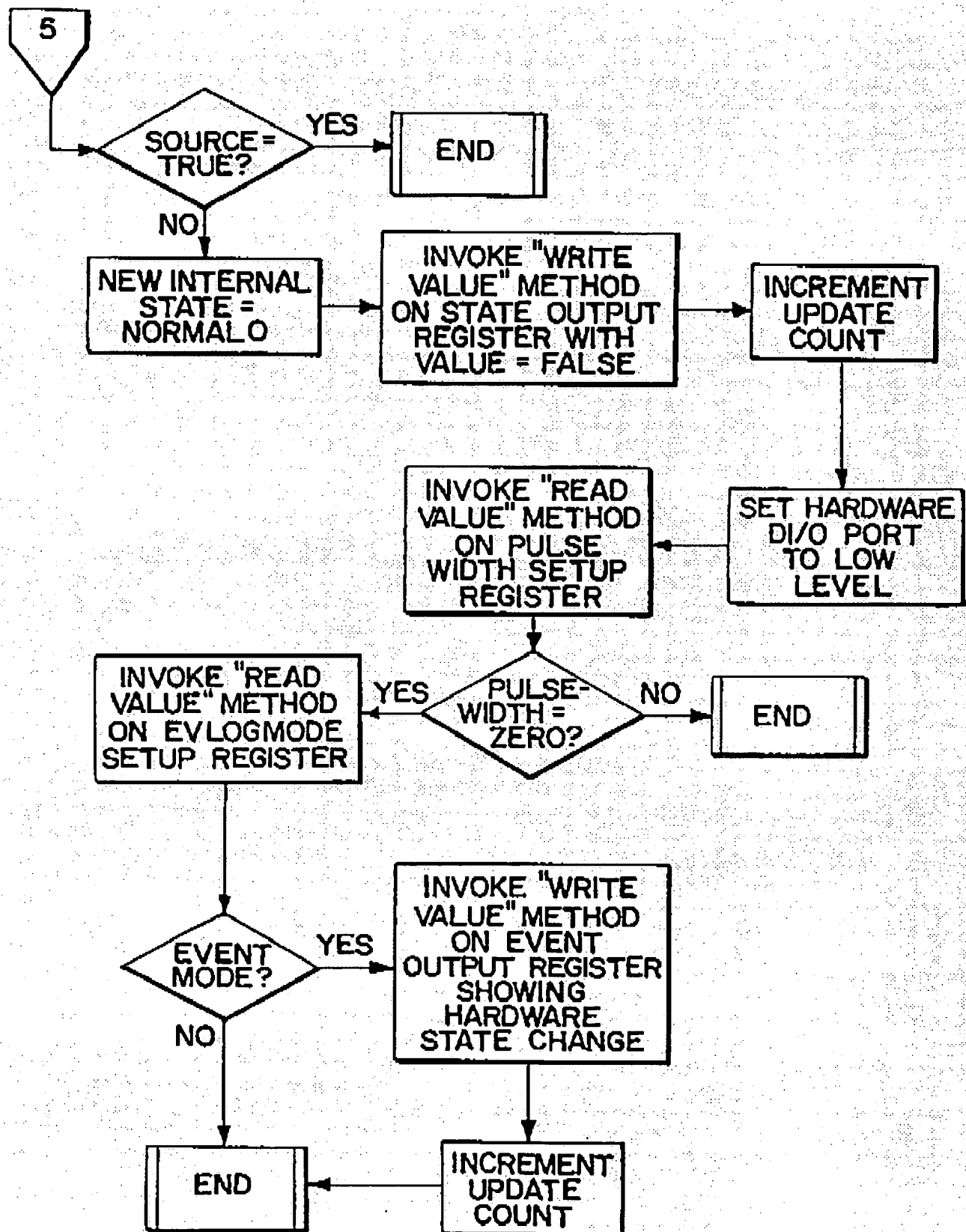


FIG. 16F

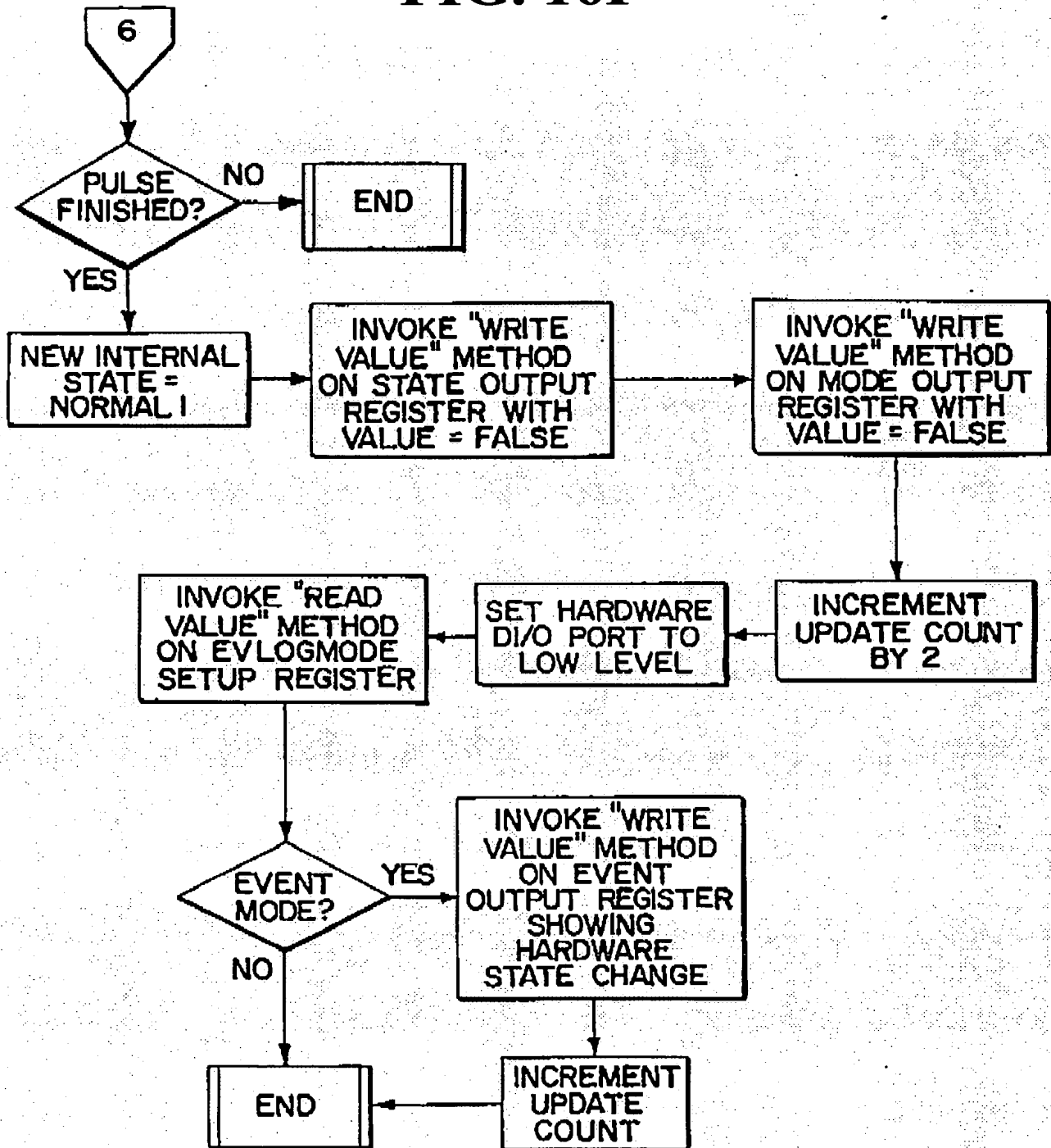


FIG. 16G

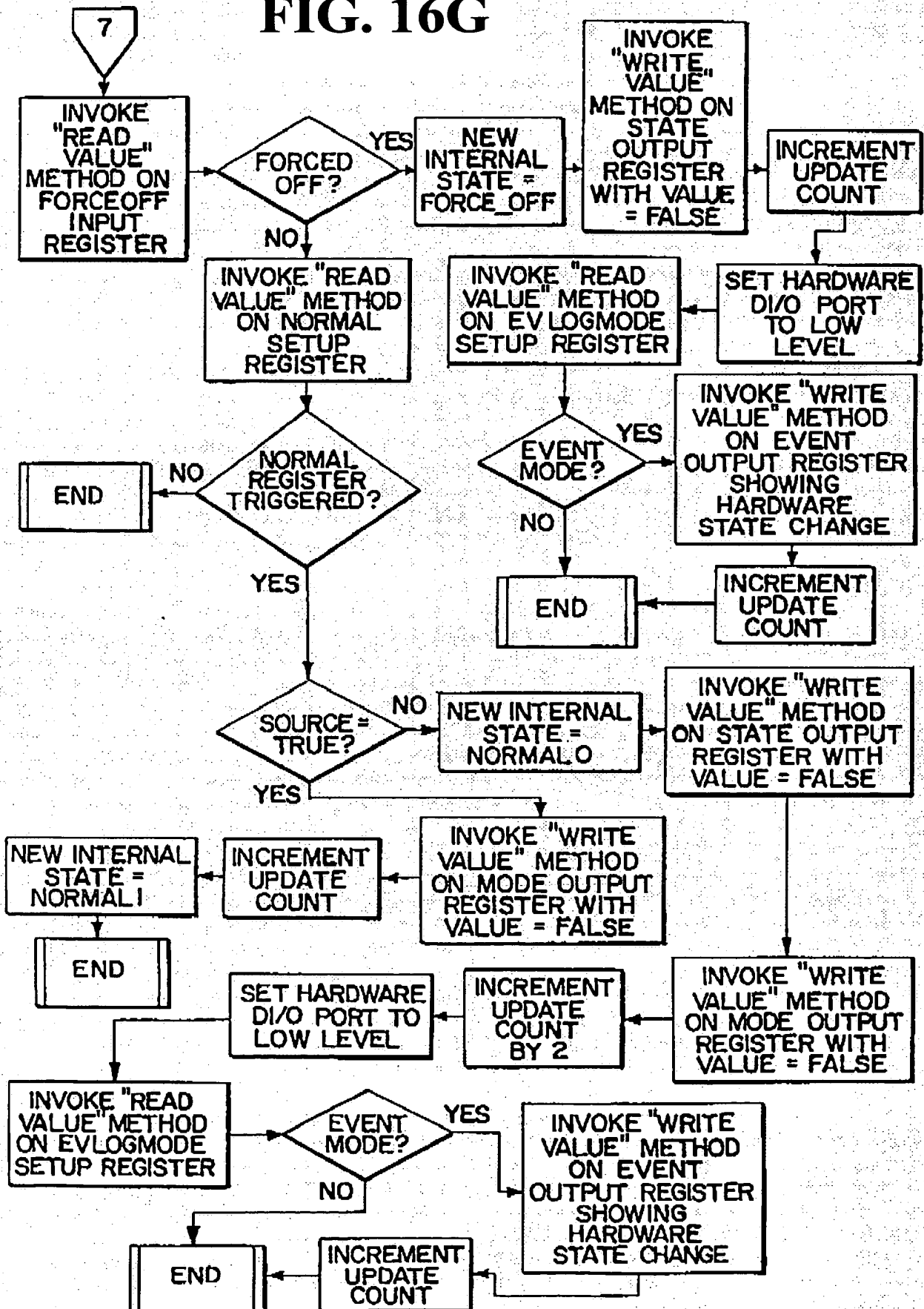


FIG. 16H

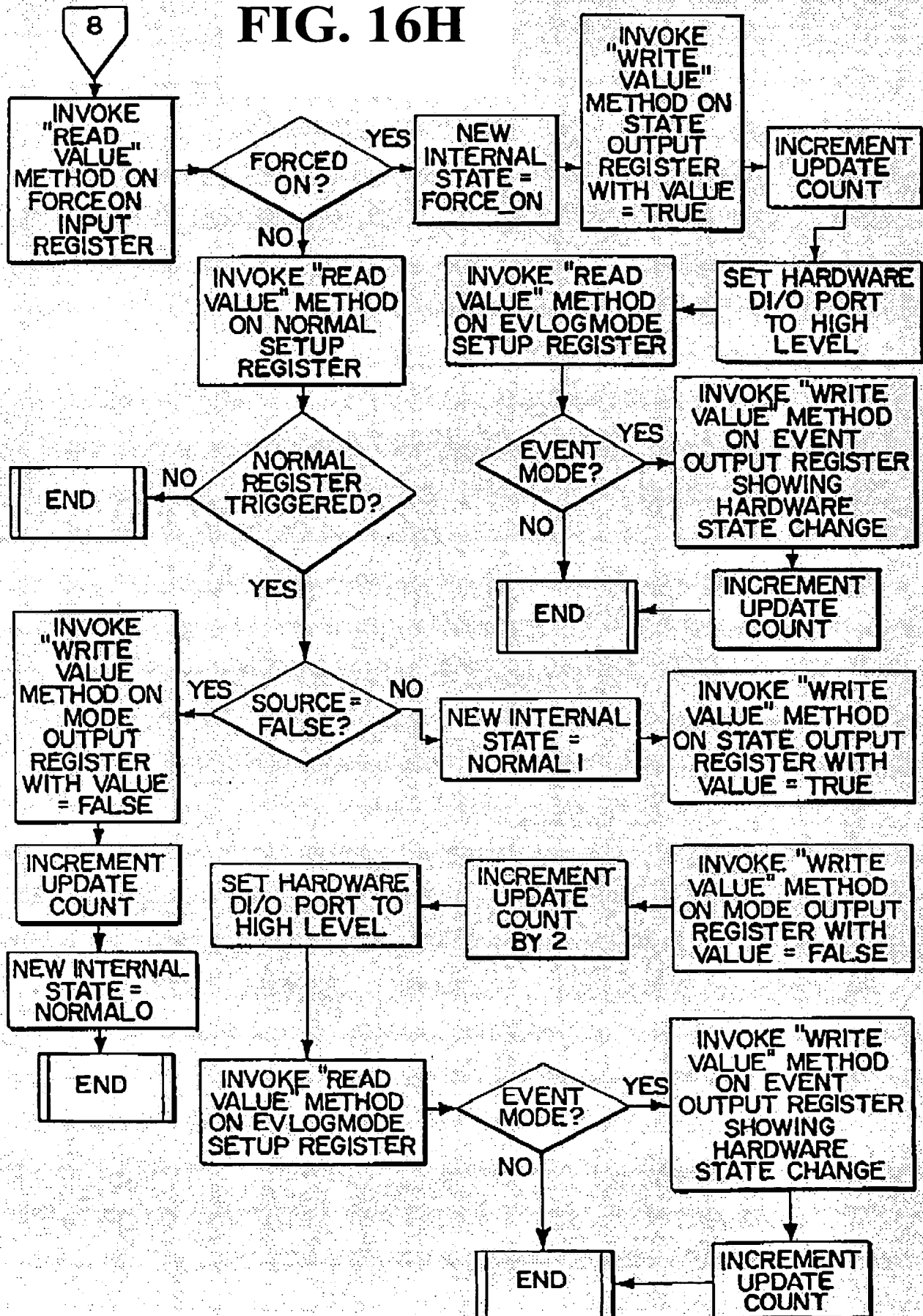


FIG. 17

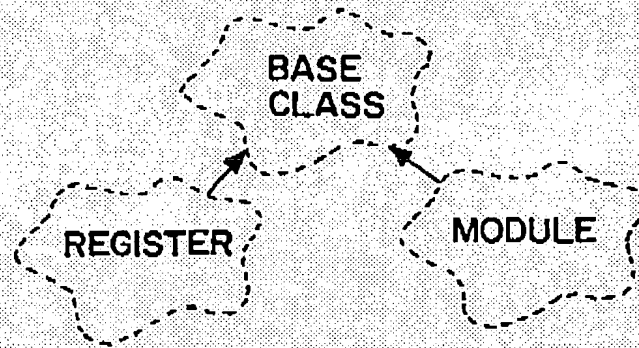


FIG. 17A

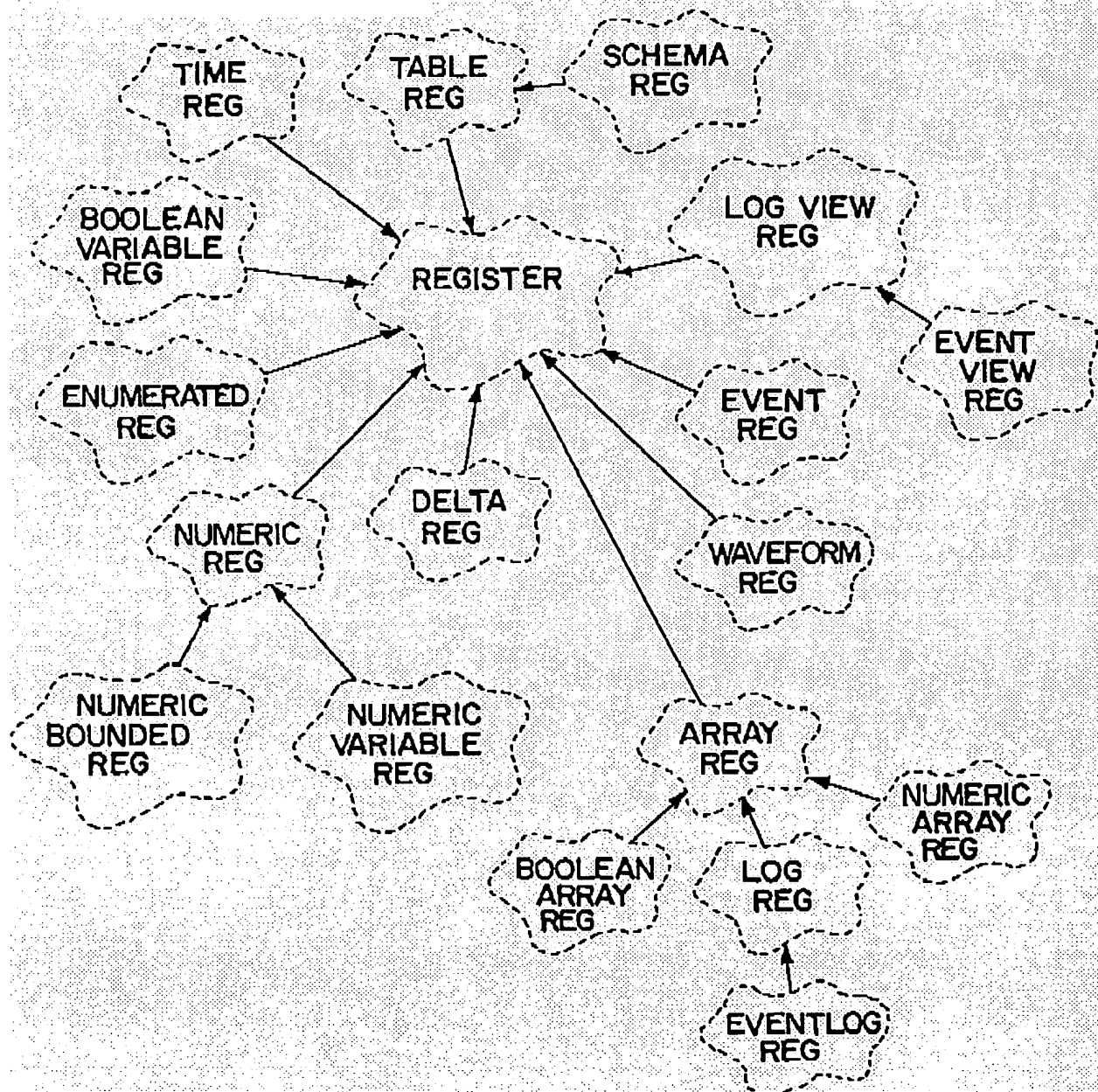


FIG. 17B

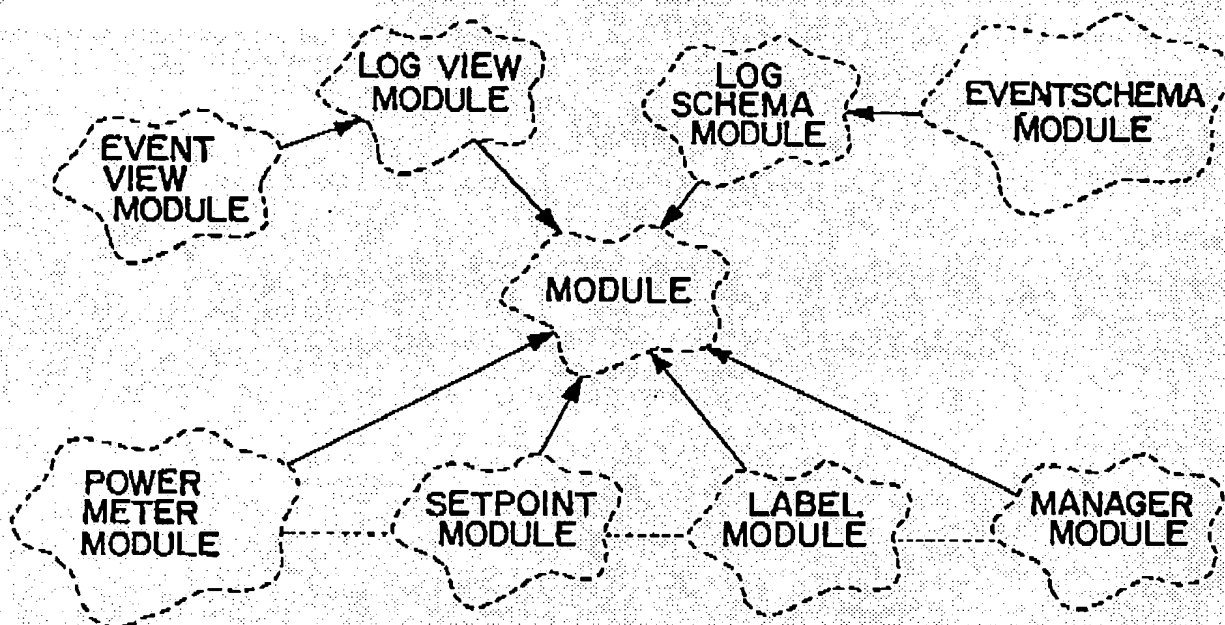


FIG. 17C

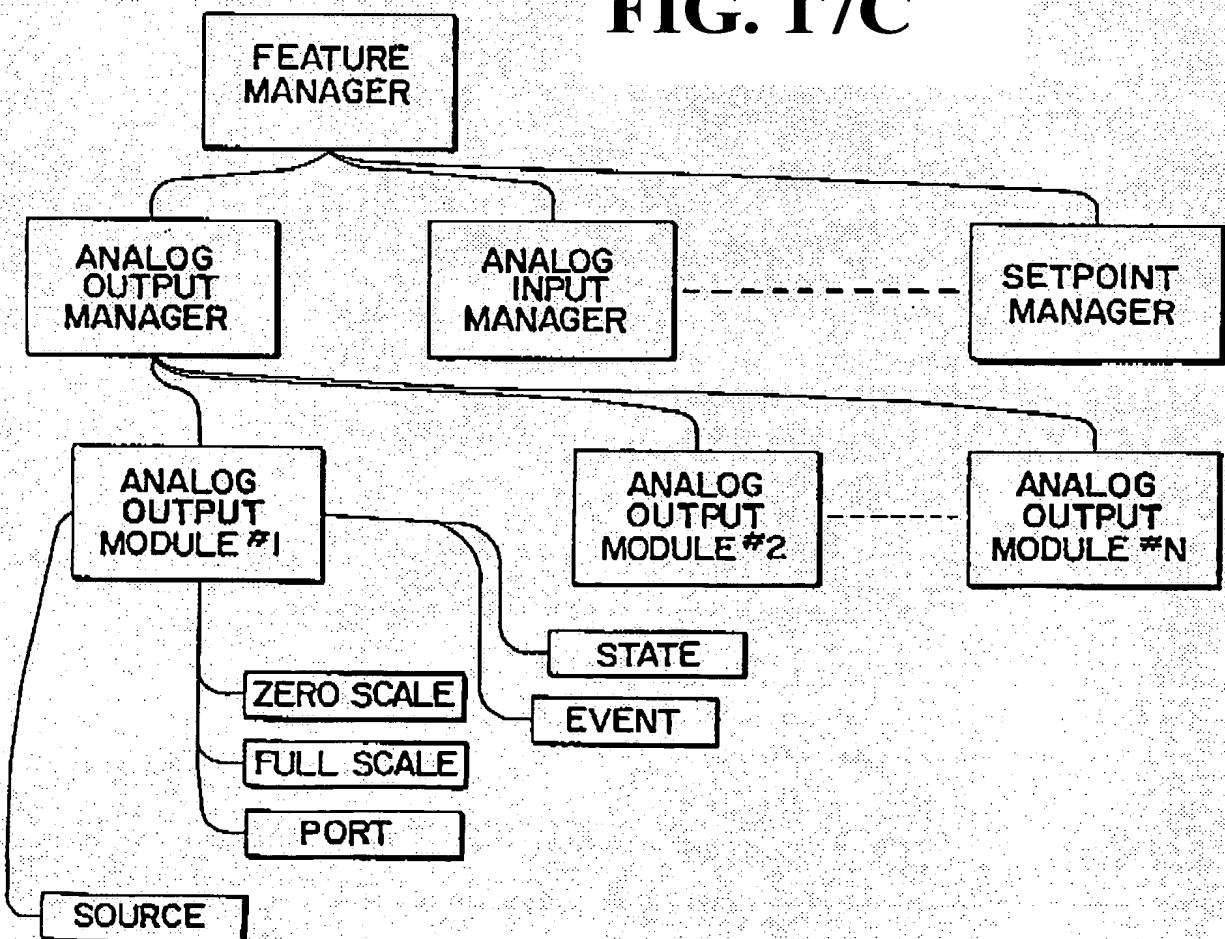


FIG. 18

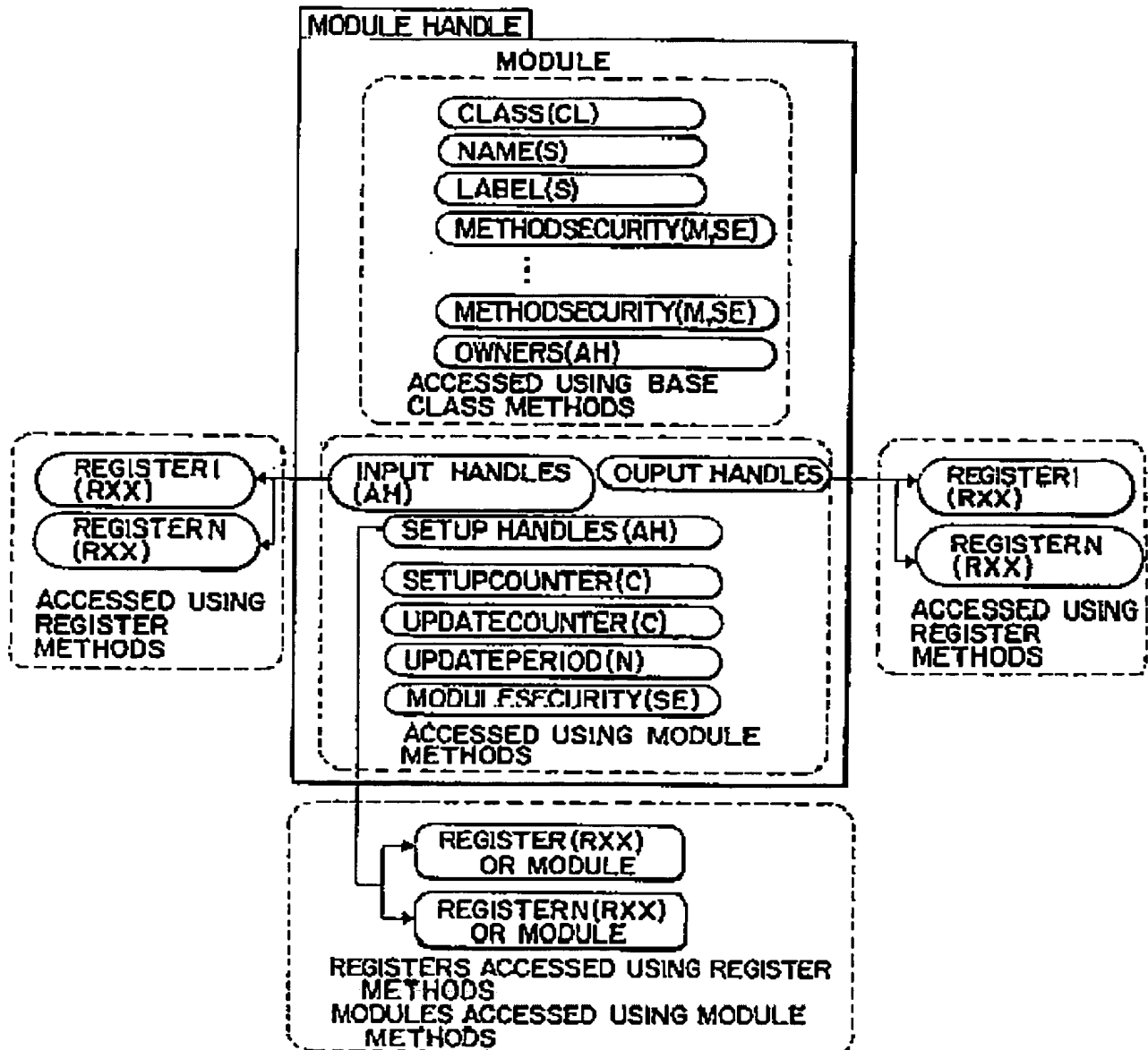


FIG. 19

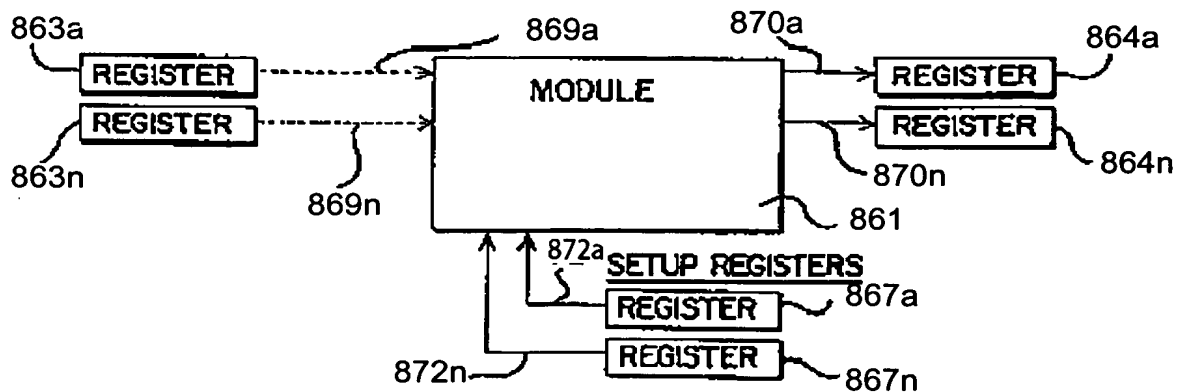


FIG. 19A

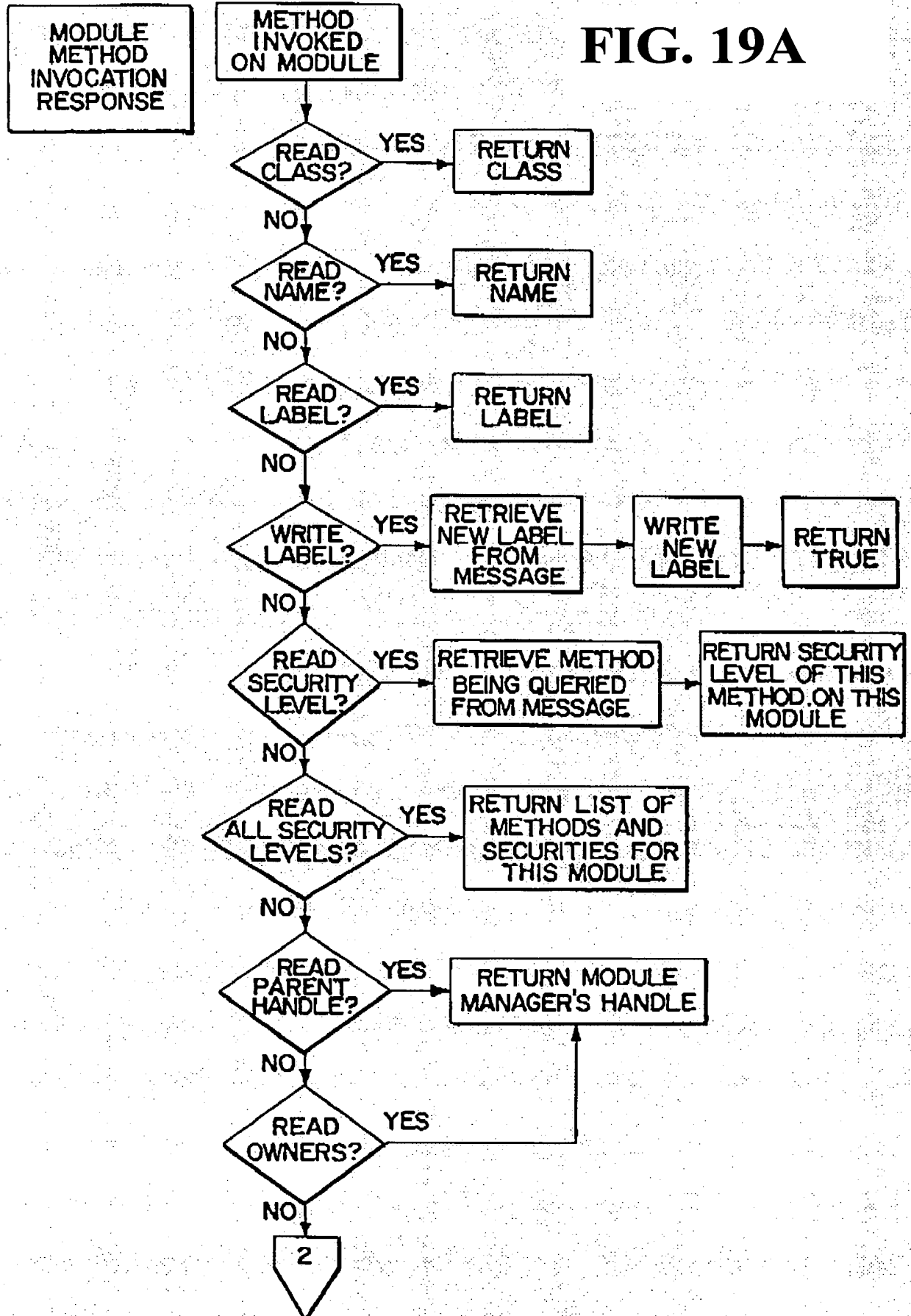


FIG. 19B

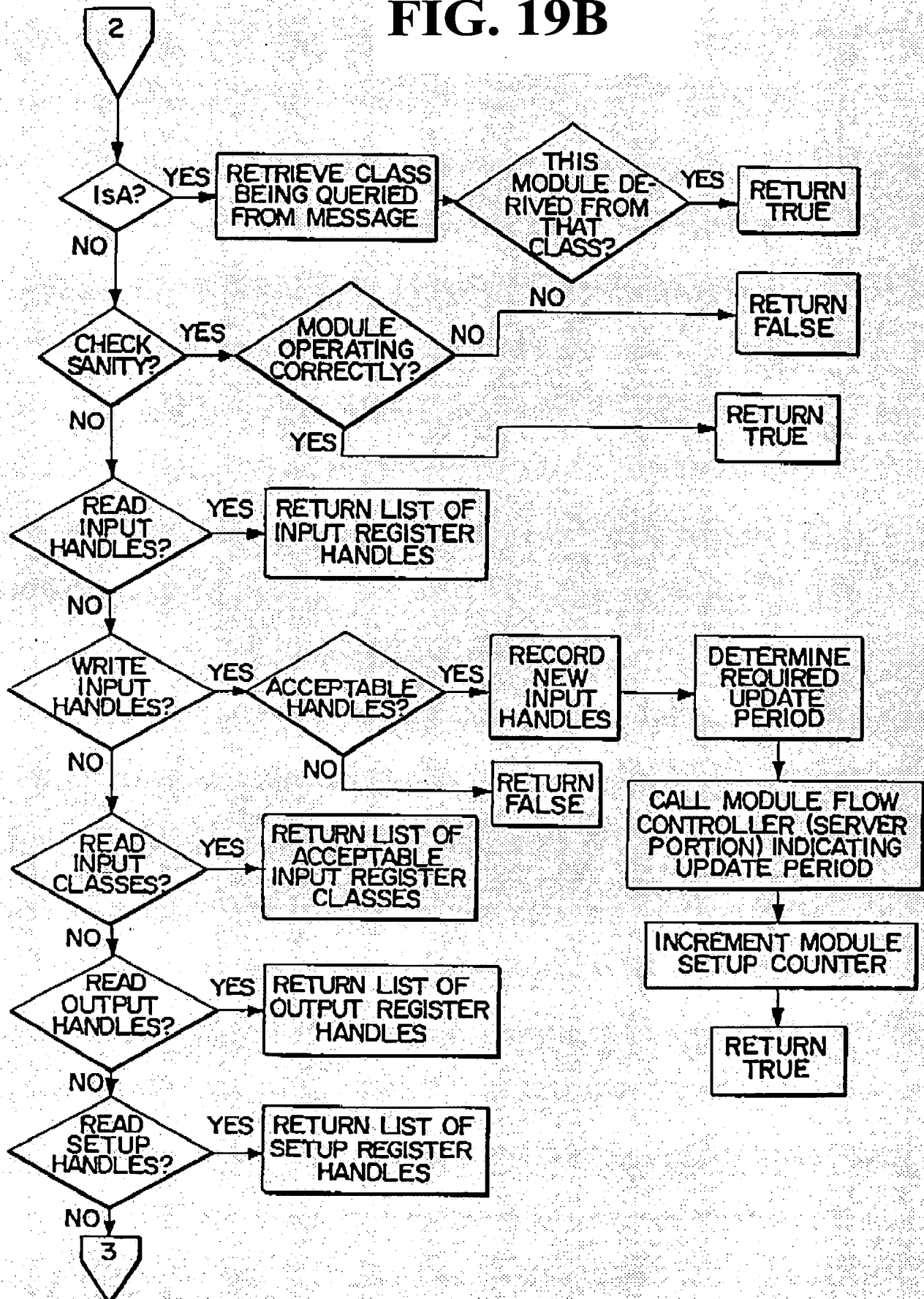


FIG. 19C

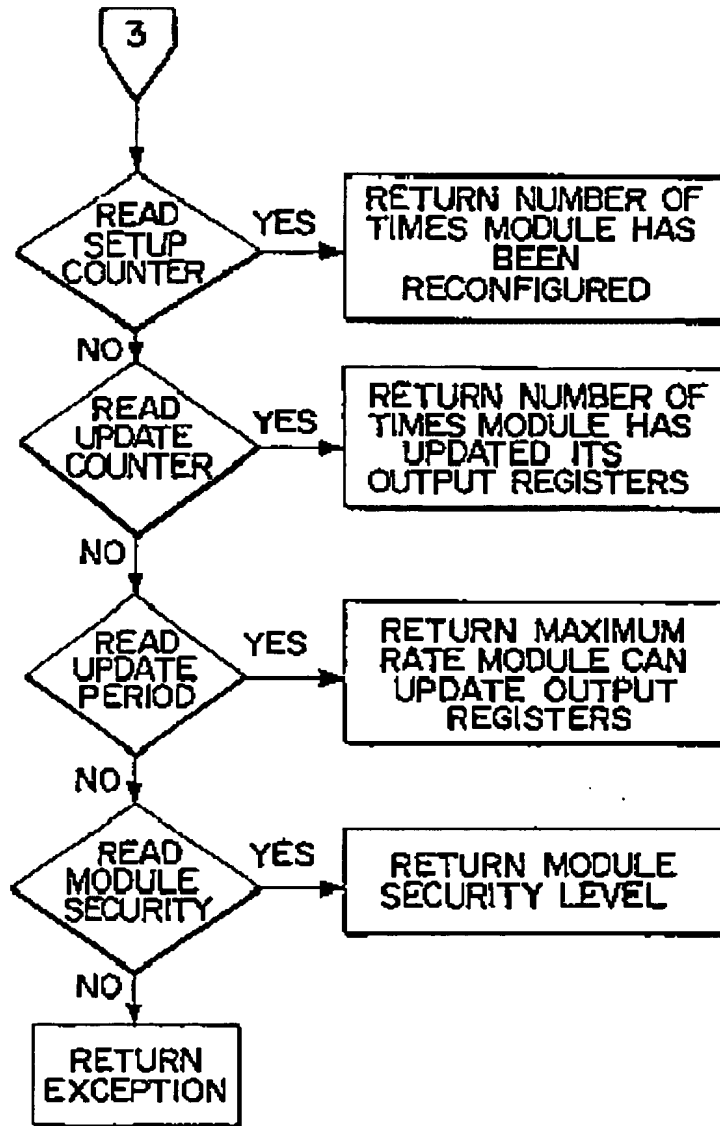


FIG. 20

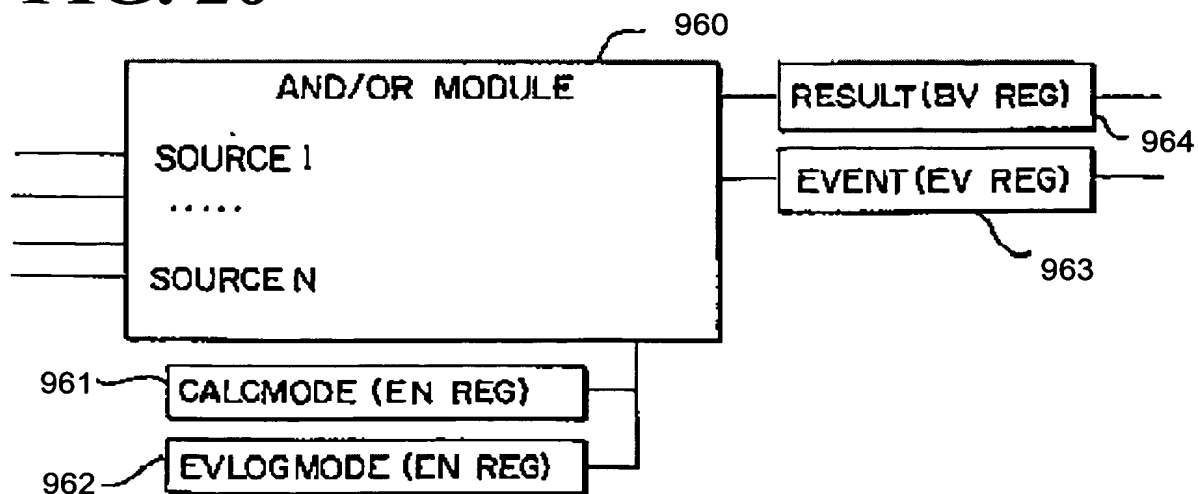


FIG. 20A

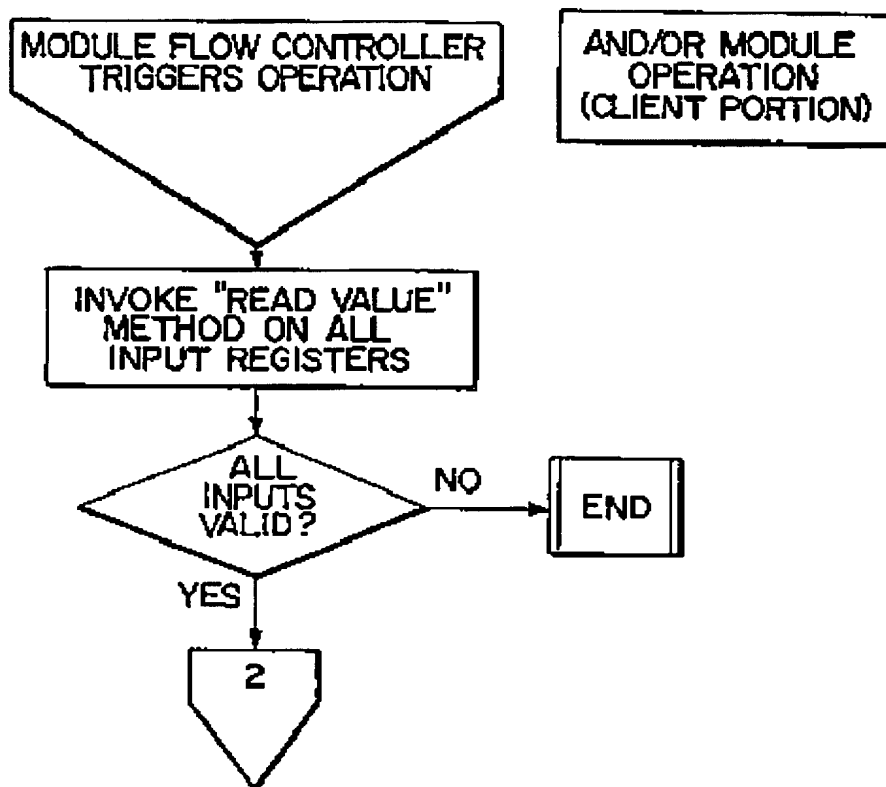


FIG. 21

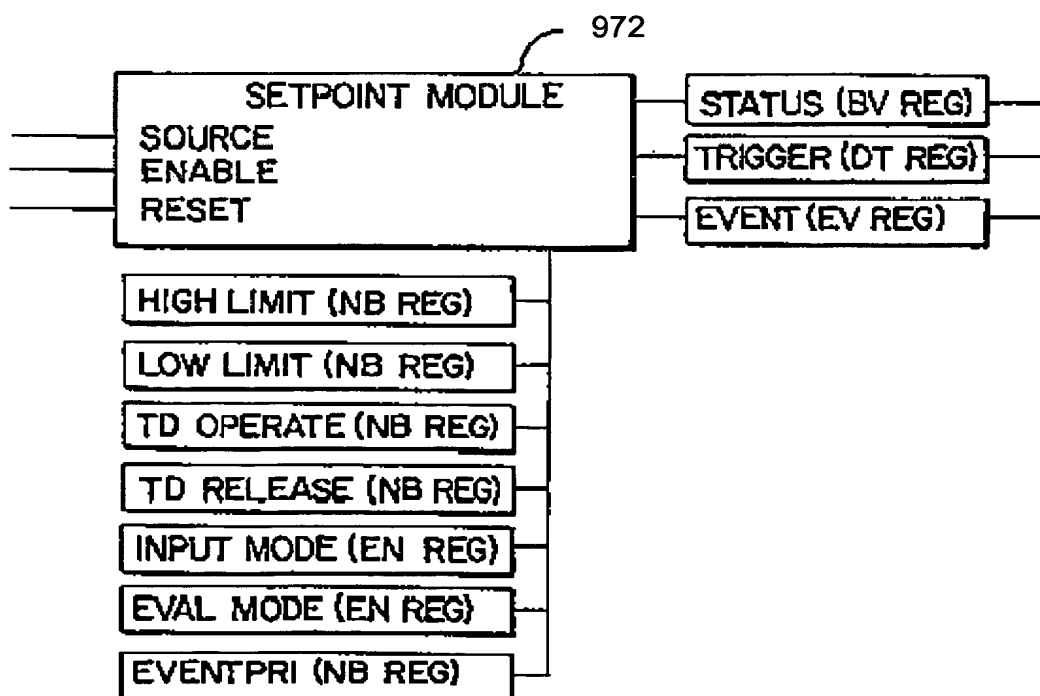


FIG. 20B

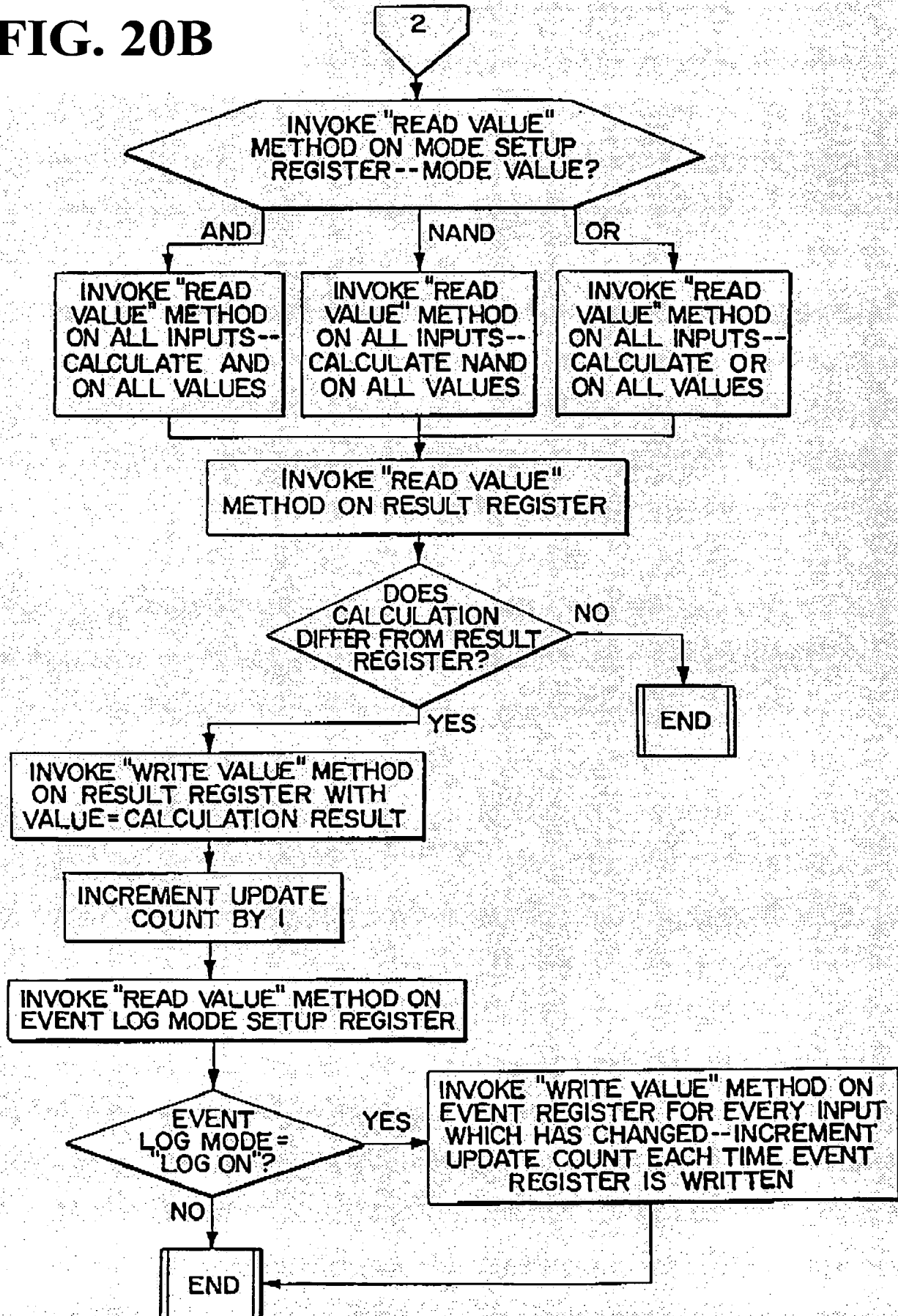


FIG. 21A

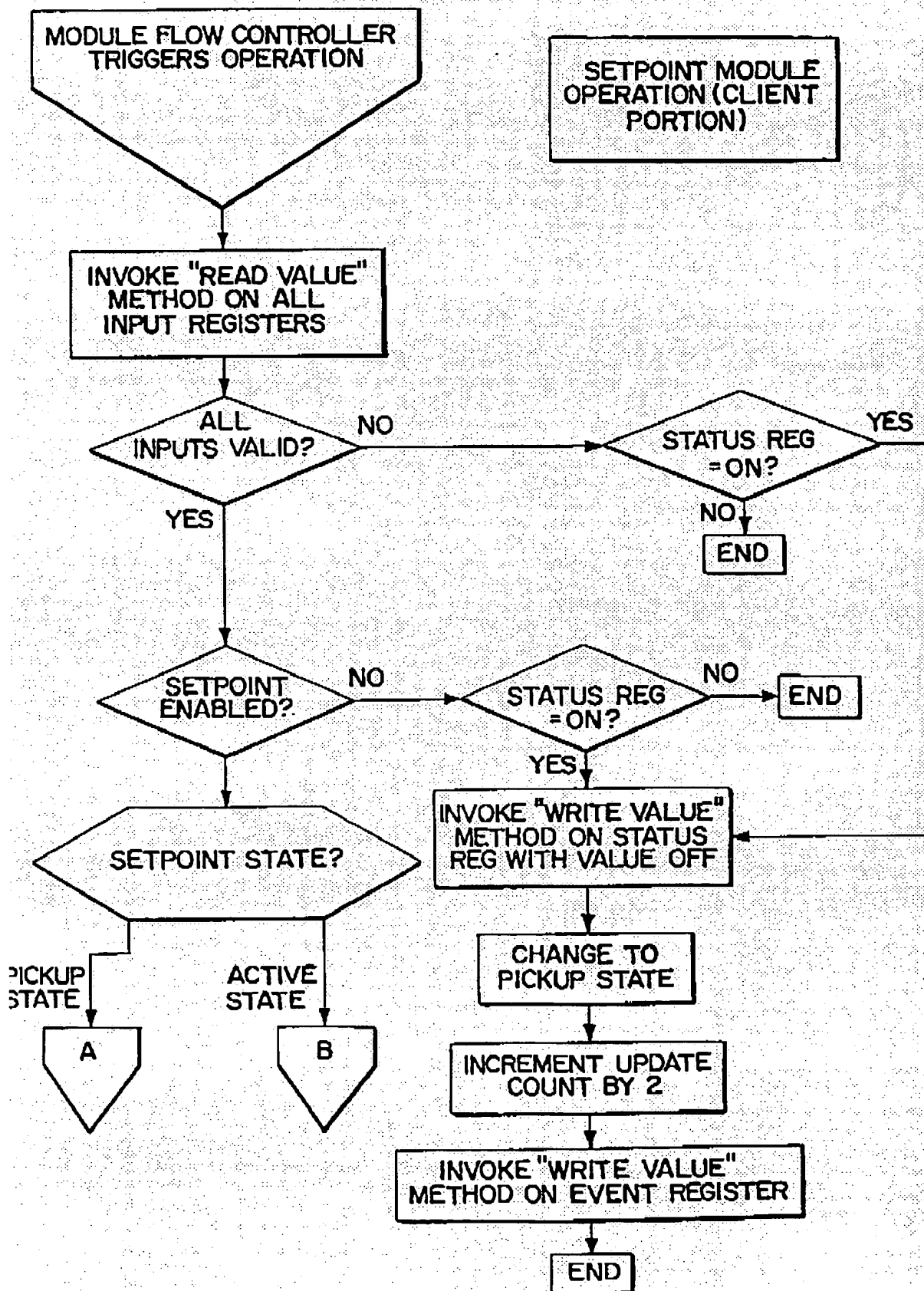


FIG. 21B

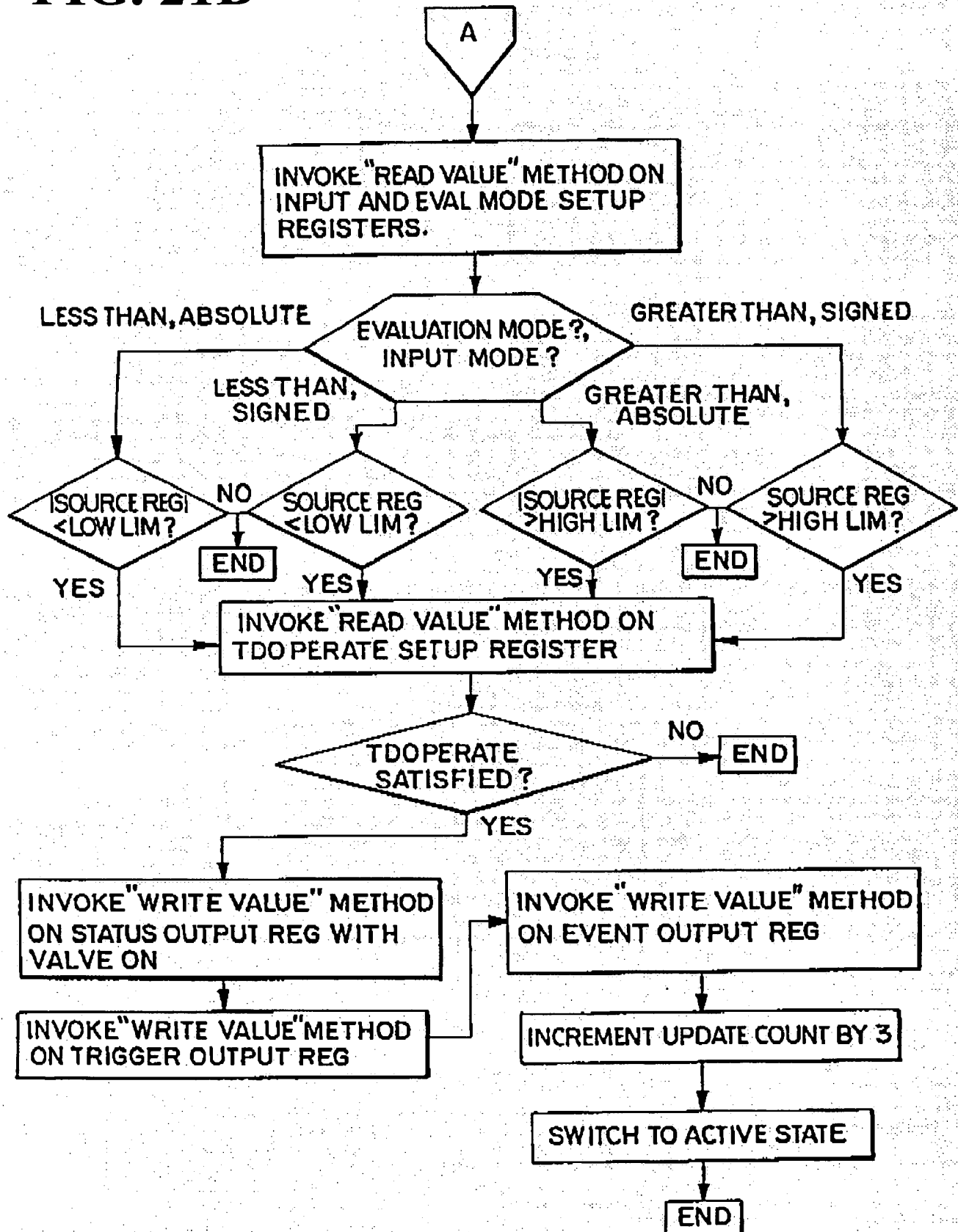


FIG. 21C

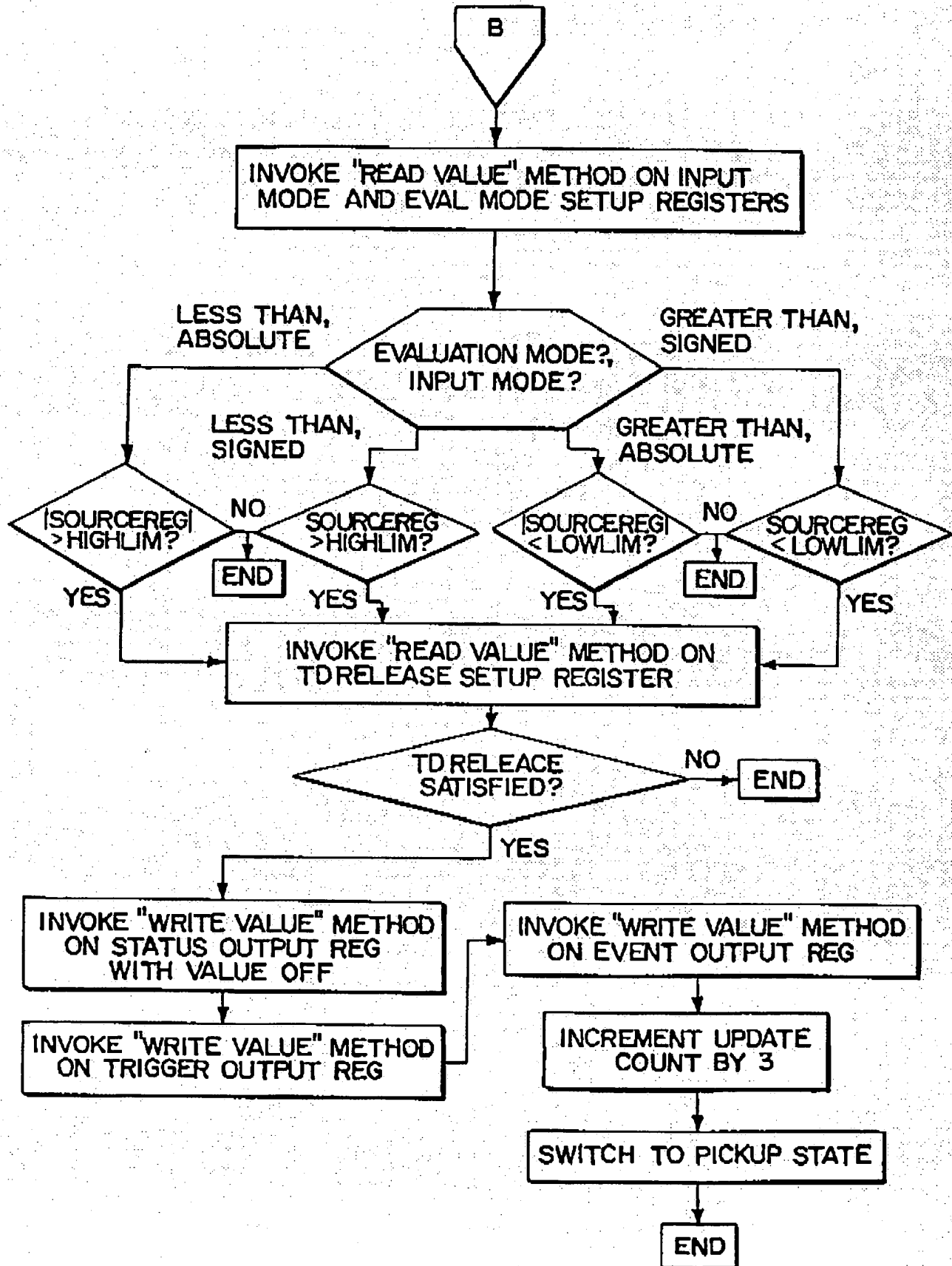


FIG. 22A

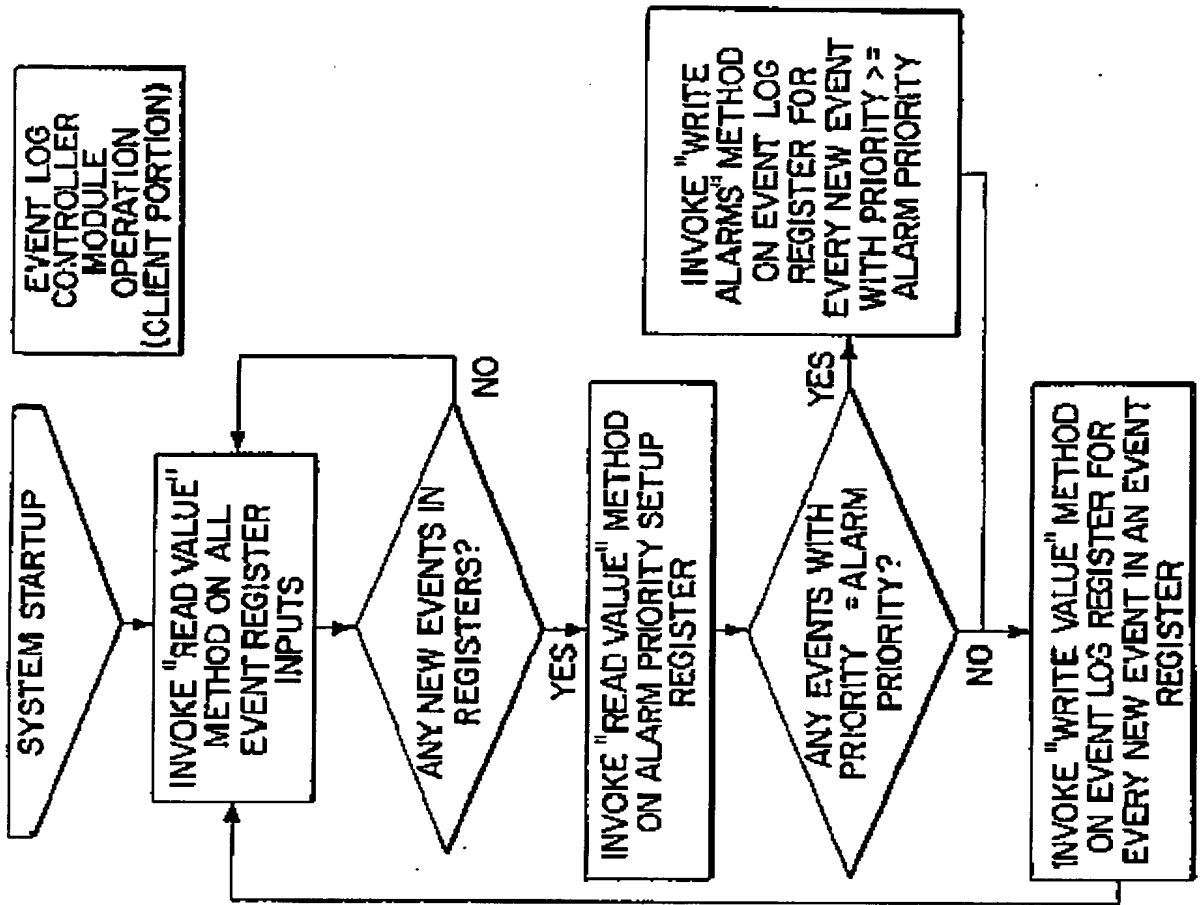


FIG. 22

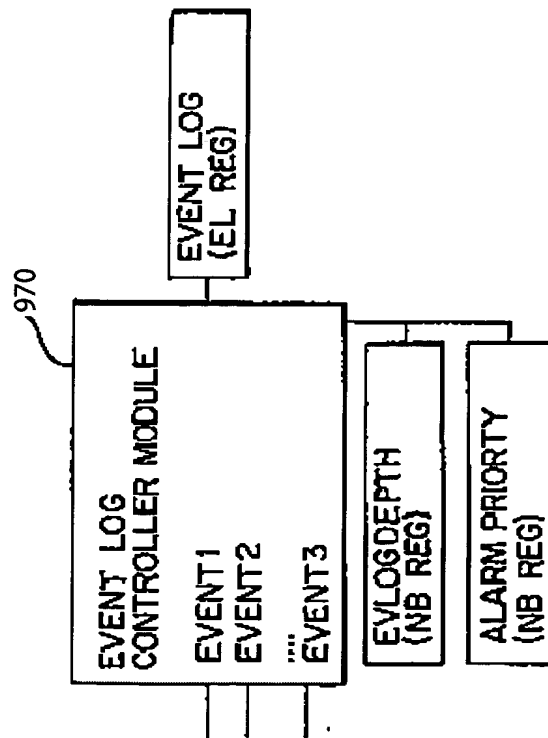


FIG. 23

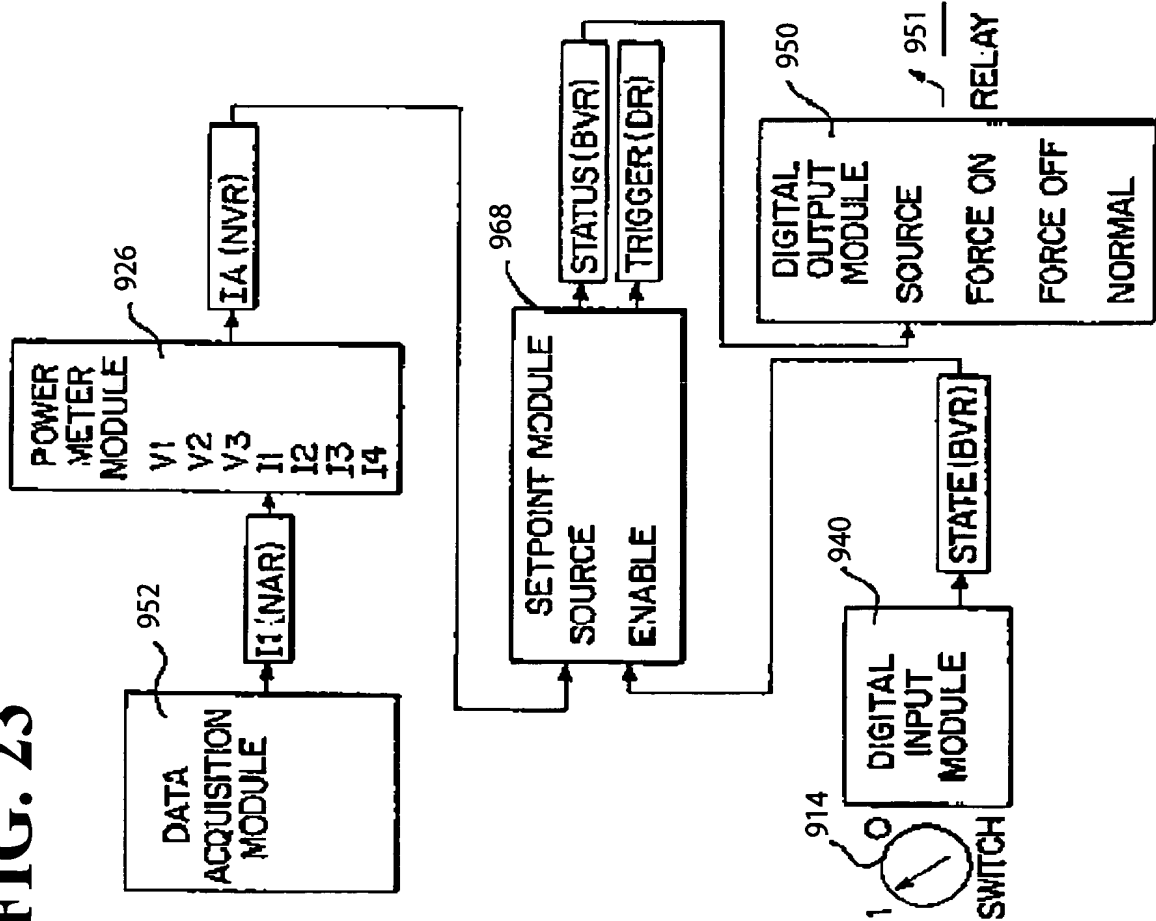
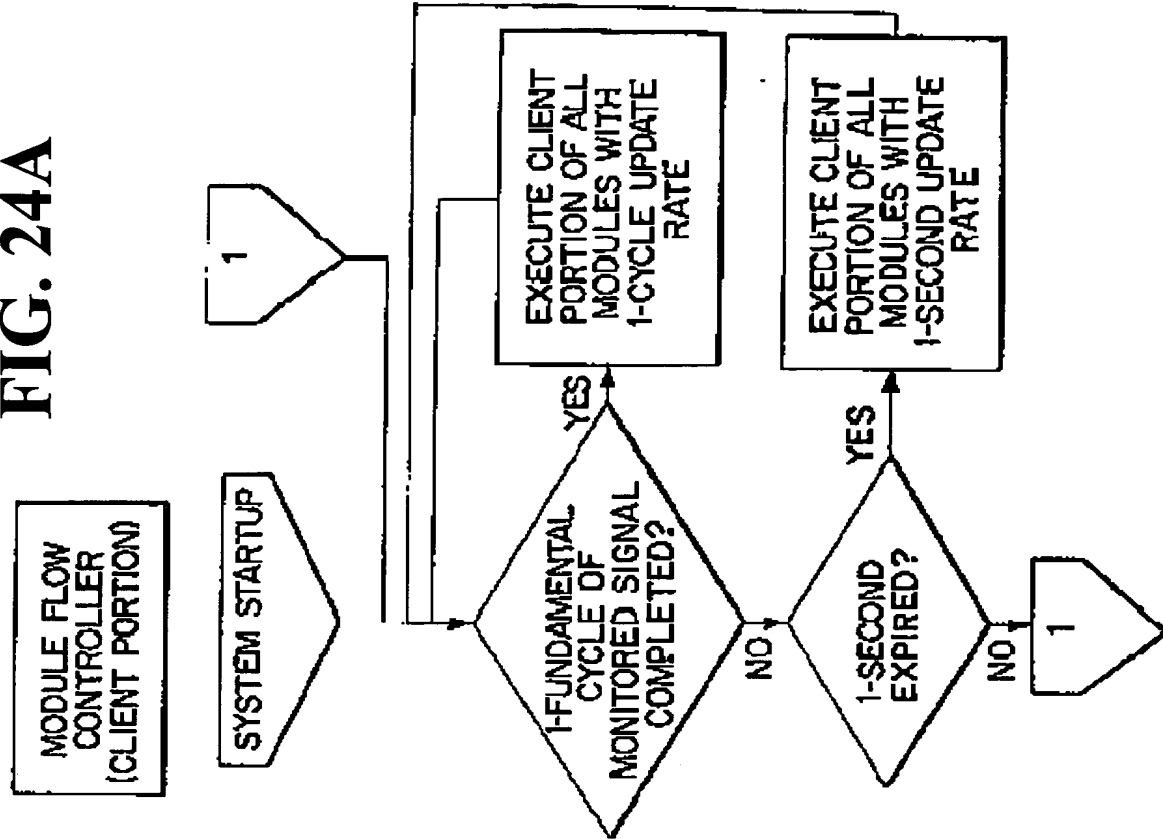


FIG. 24A



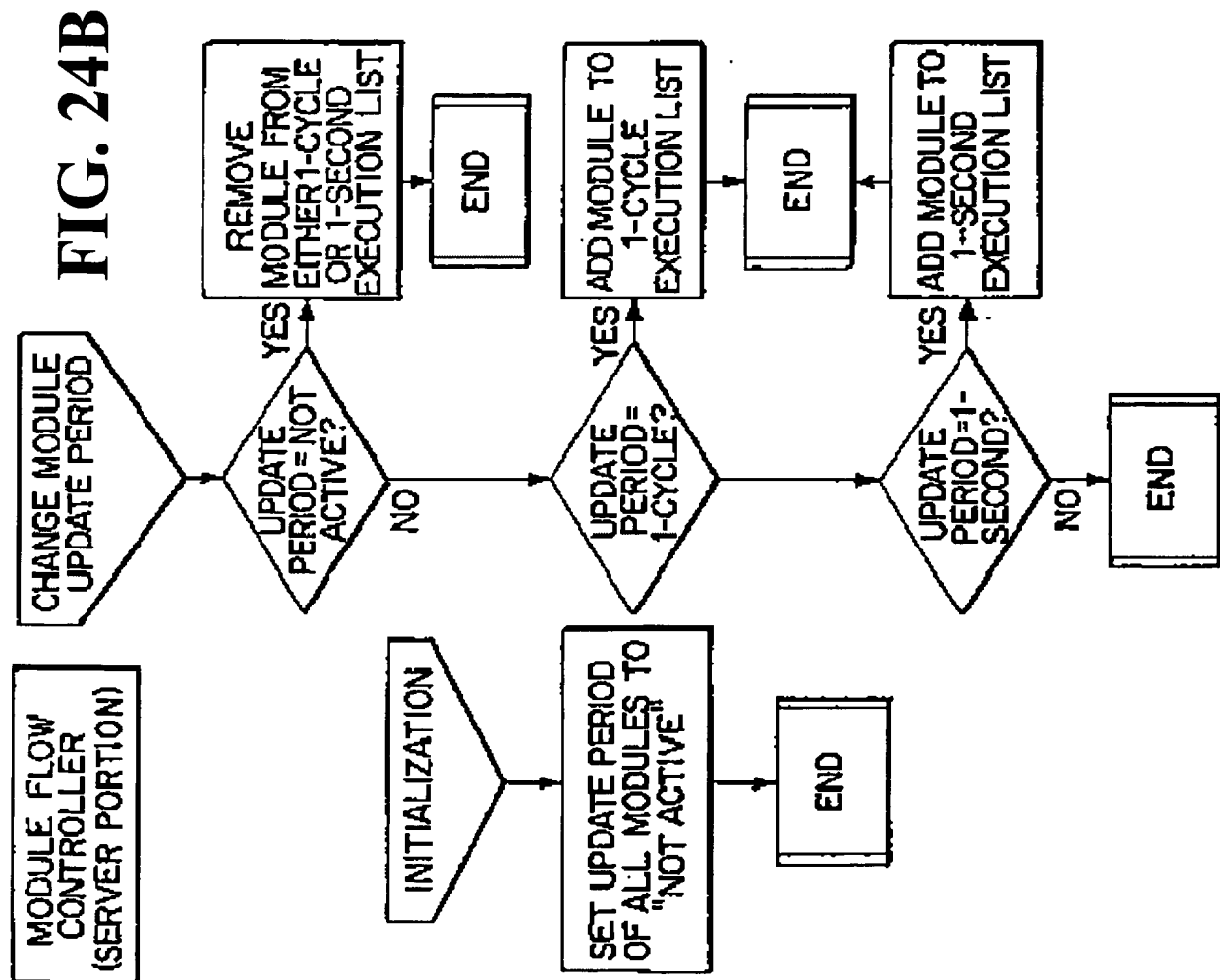


FIG. 25

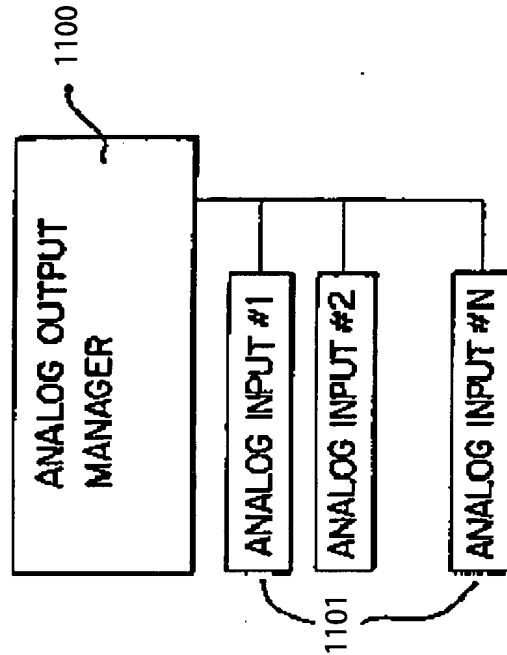


FIG. 25A

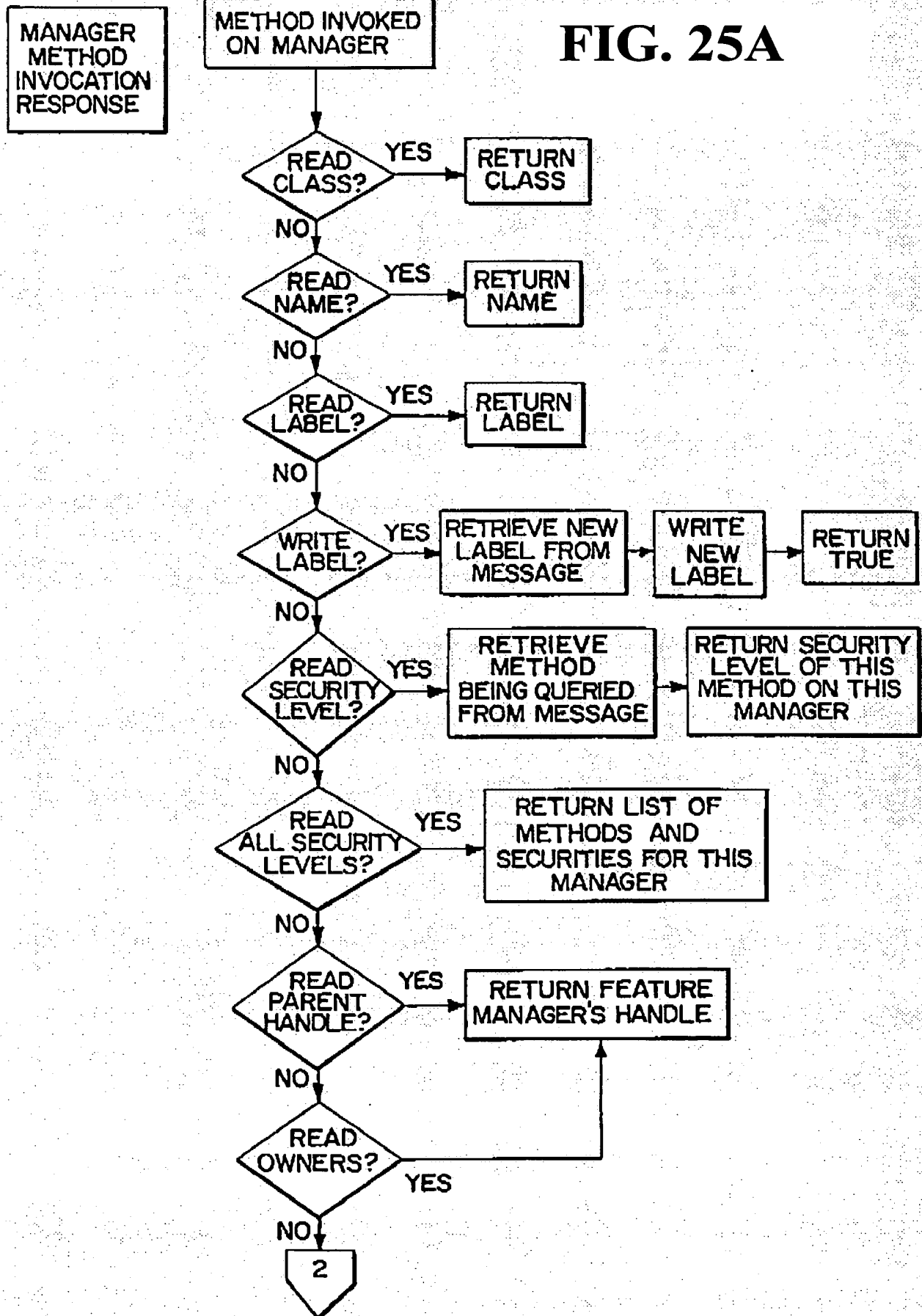


FIG. 25B

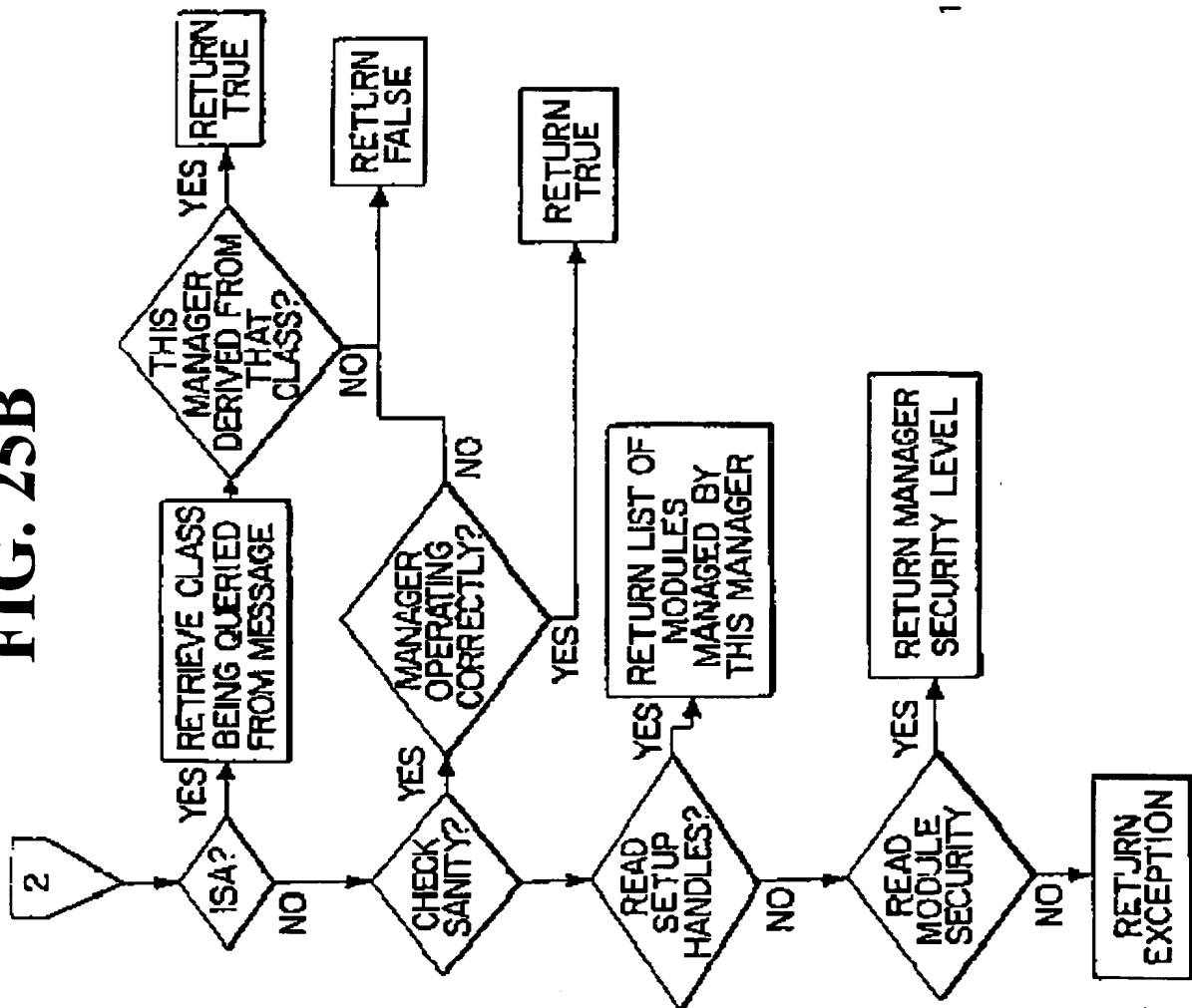
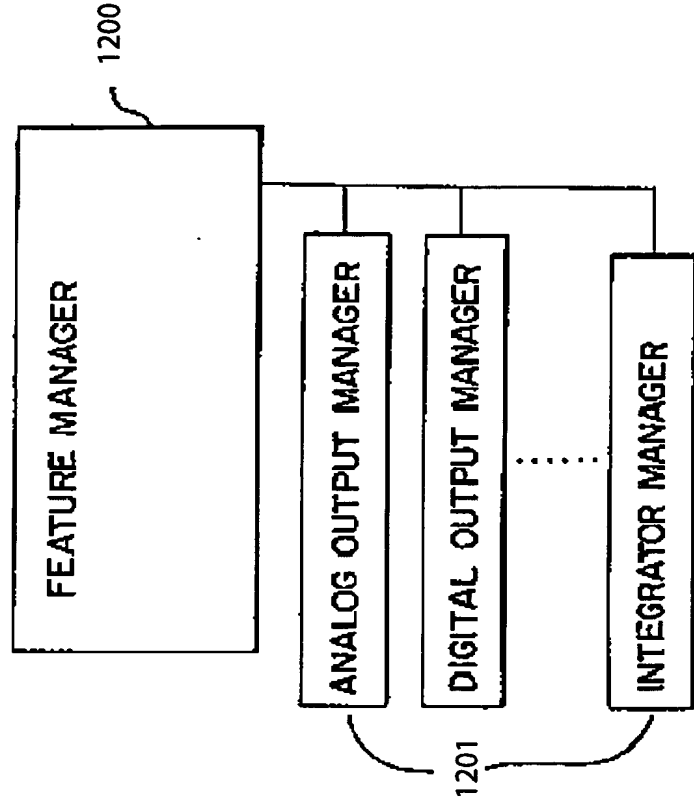


FIG. 26



FEATURE
MANAGER
METHOD
INVOCATION
RESPONSE

FIG. 26A

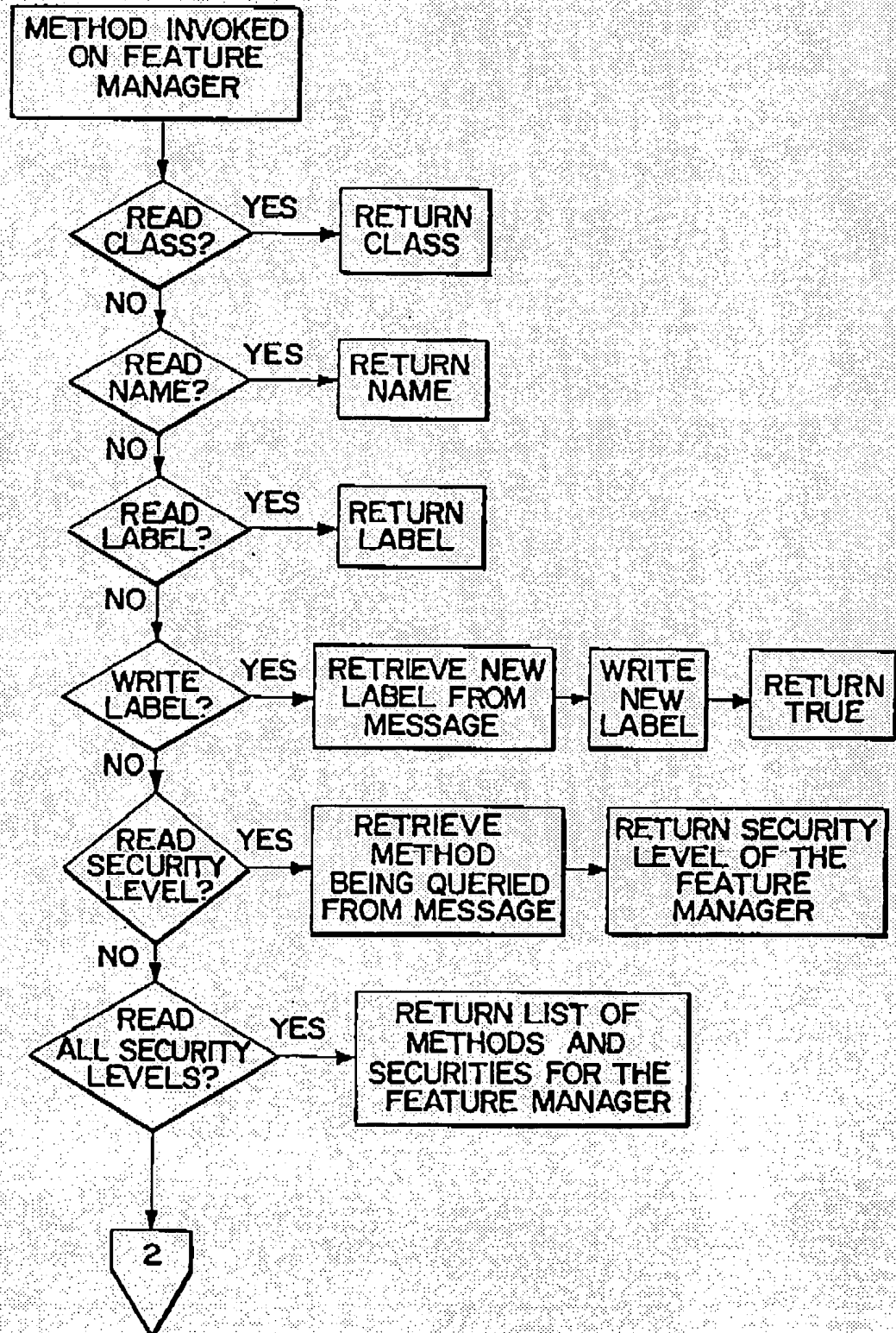
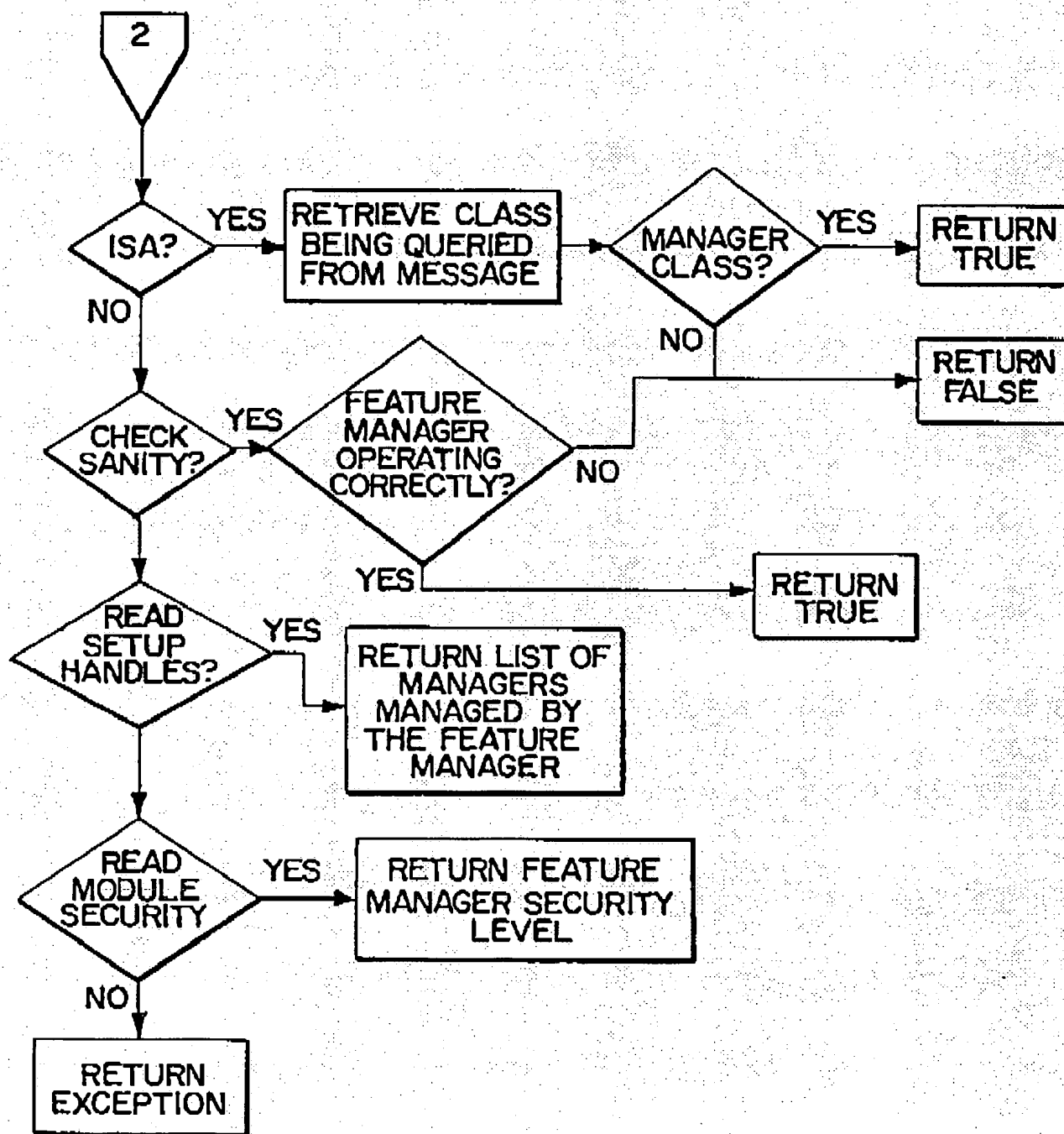


FIG. 26B



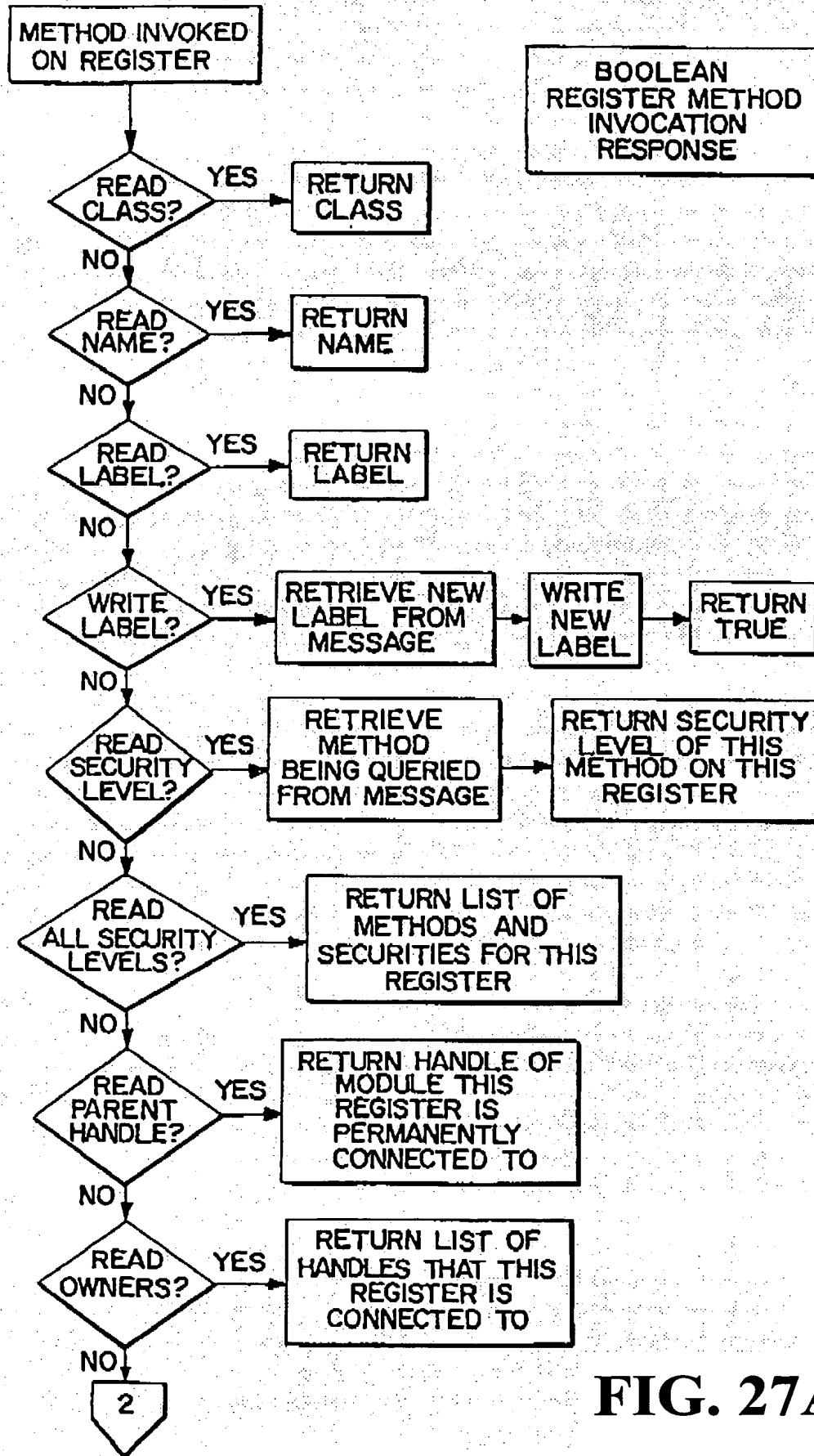


FIG. 27B

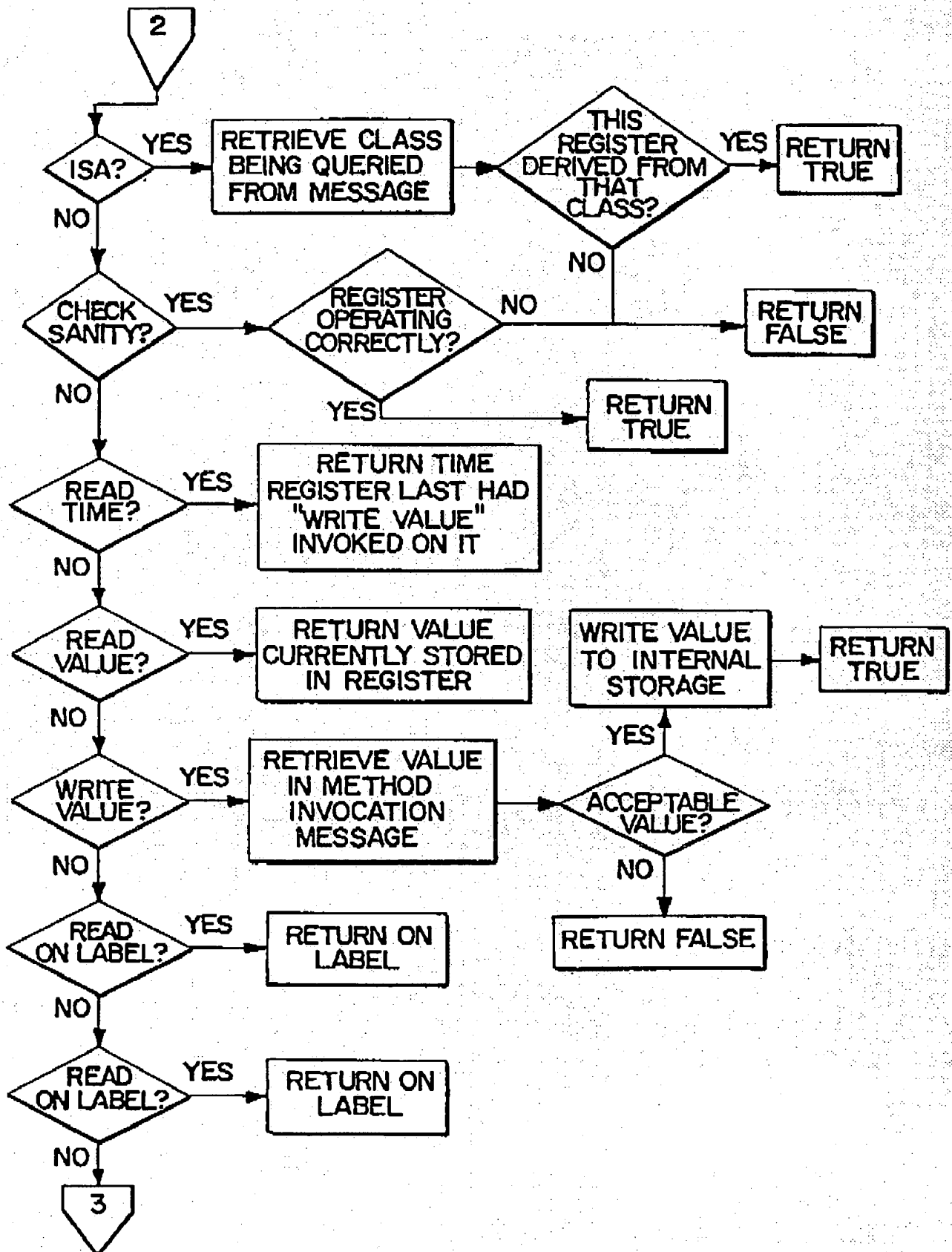


FIG. 27C

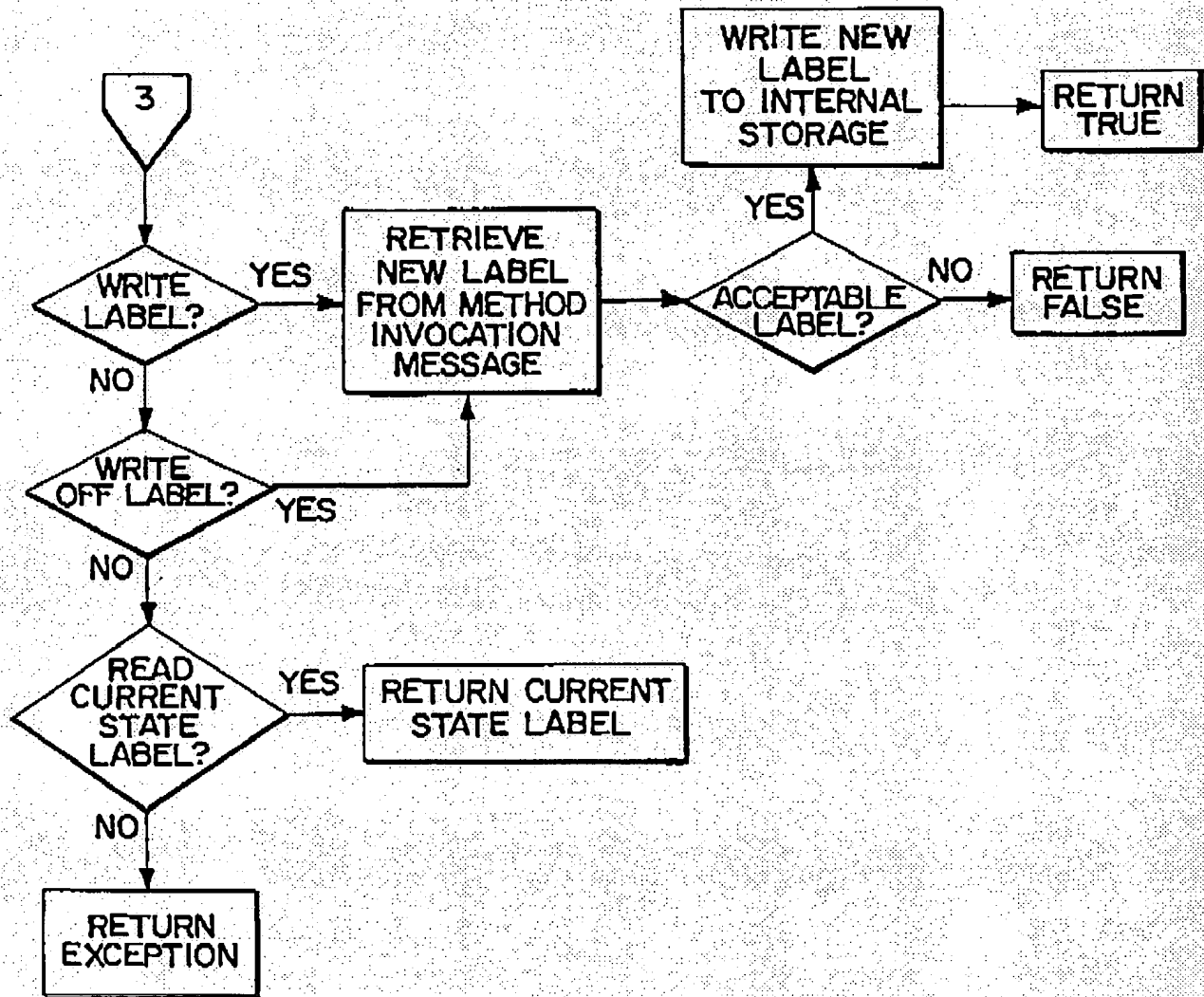


FIG. 28A

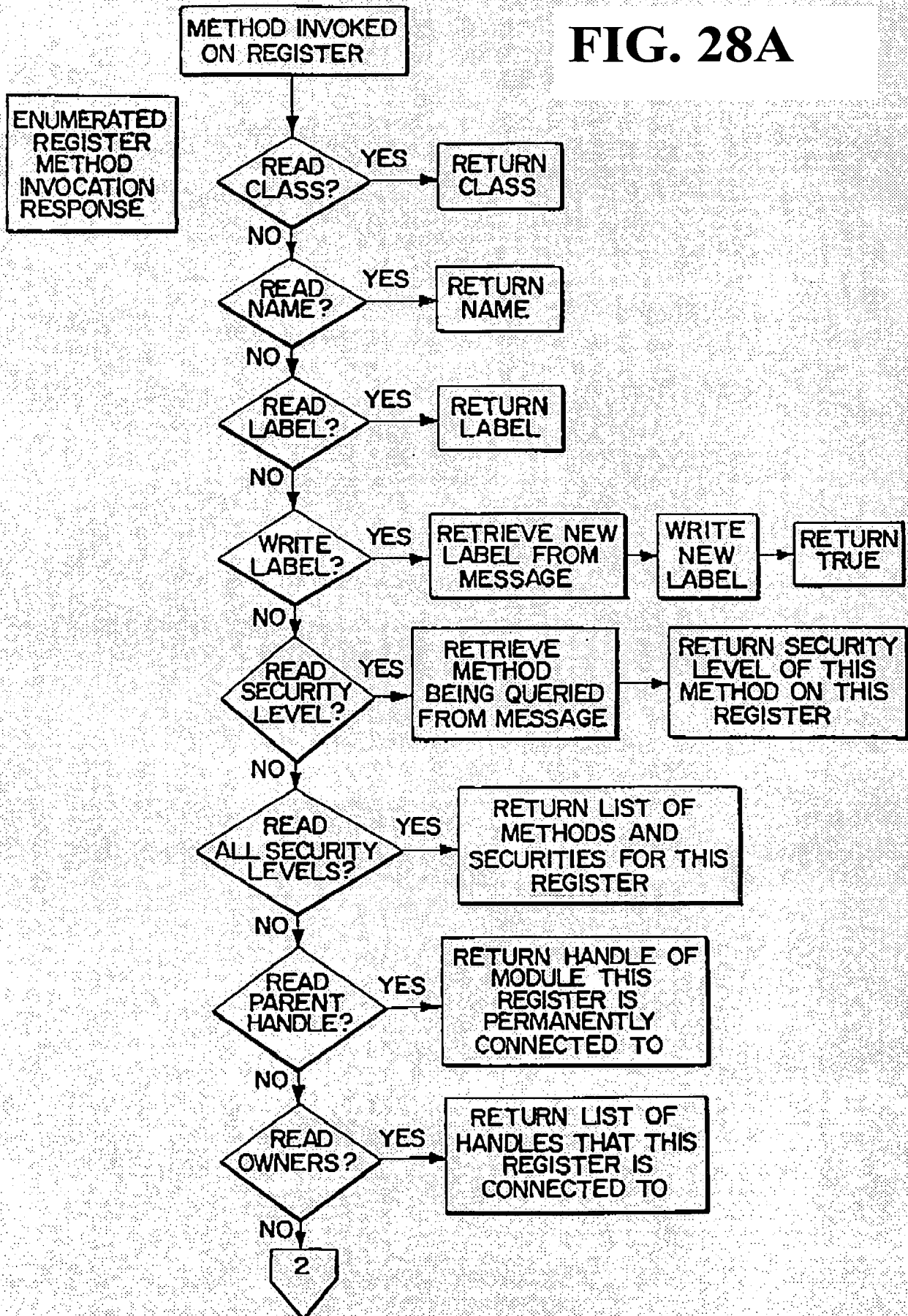


FIG. 28B

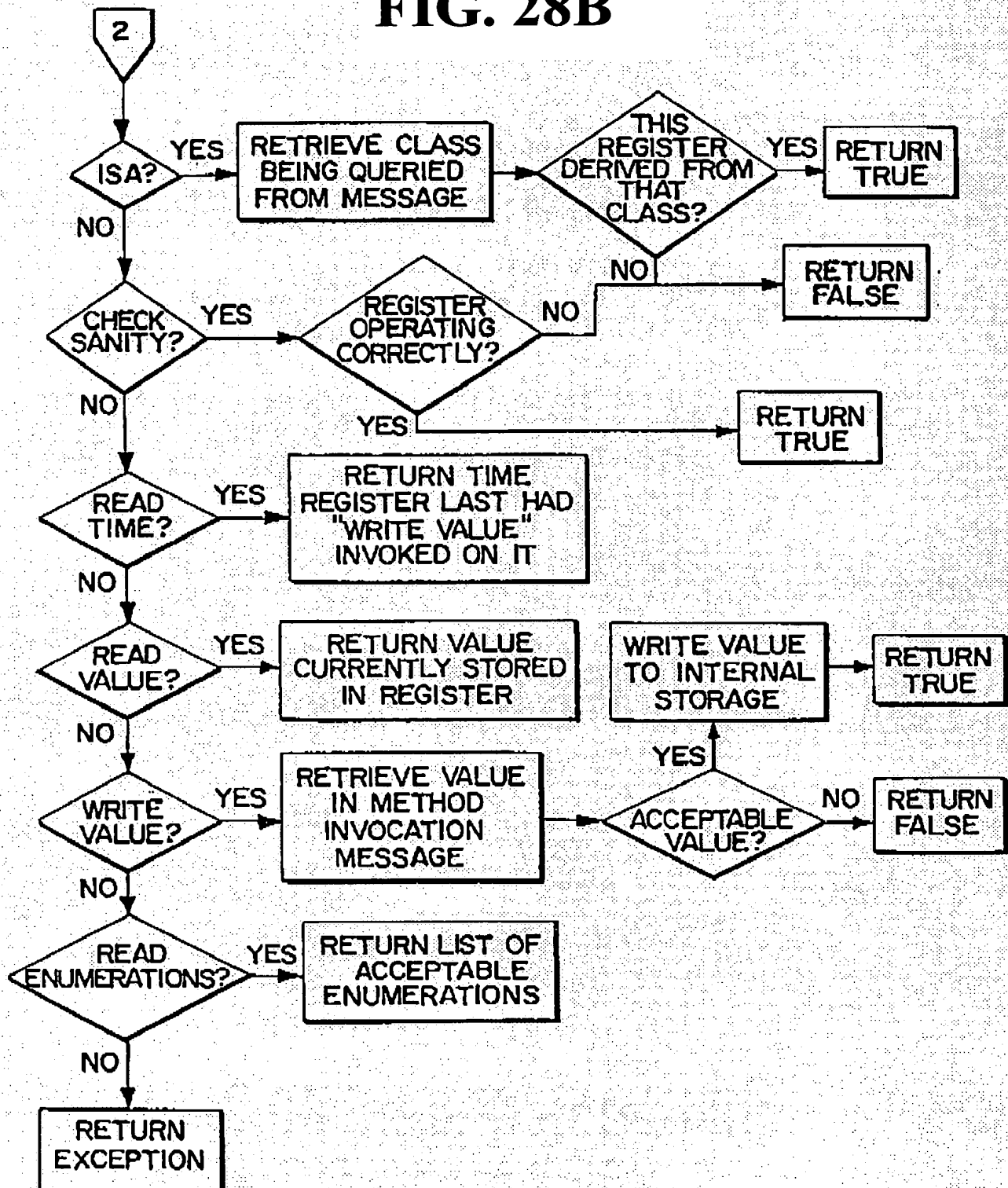


FIG. 29A

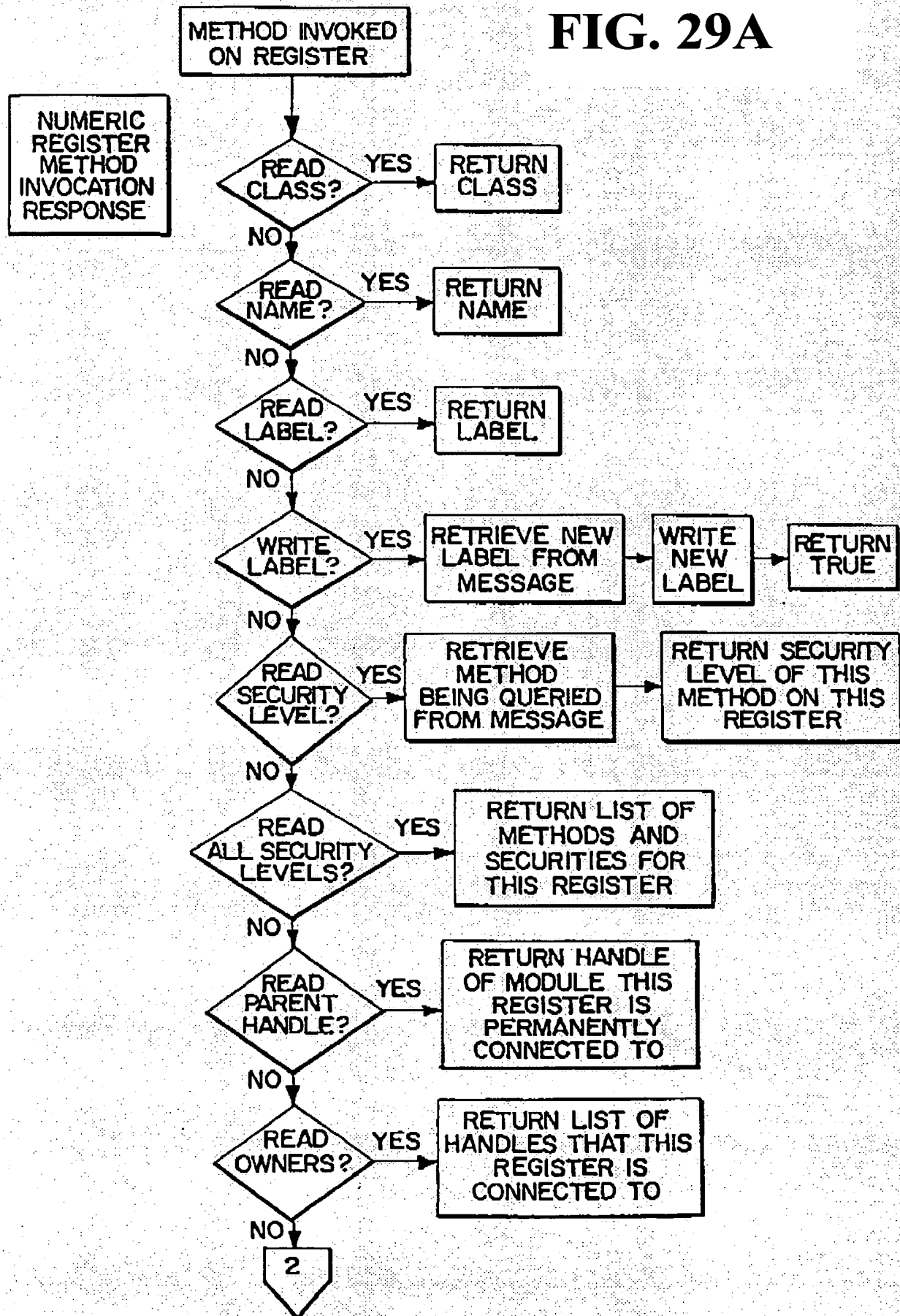


FIG. 29B

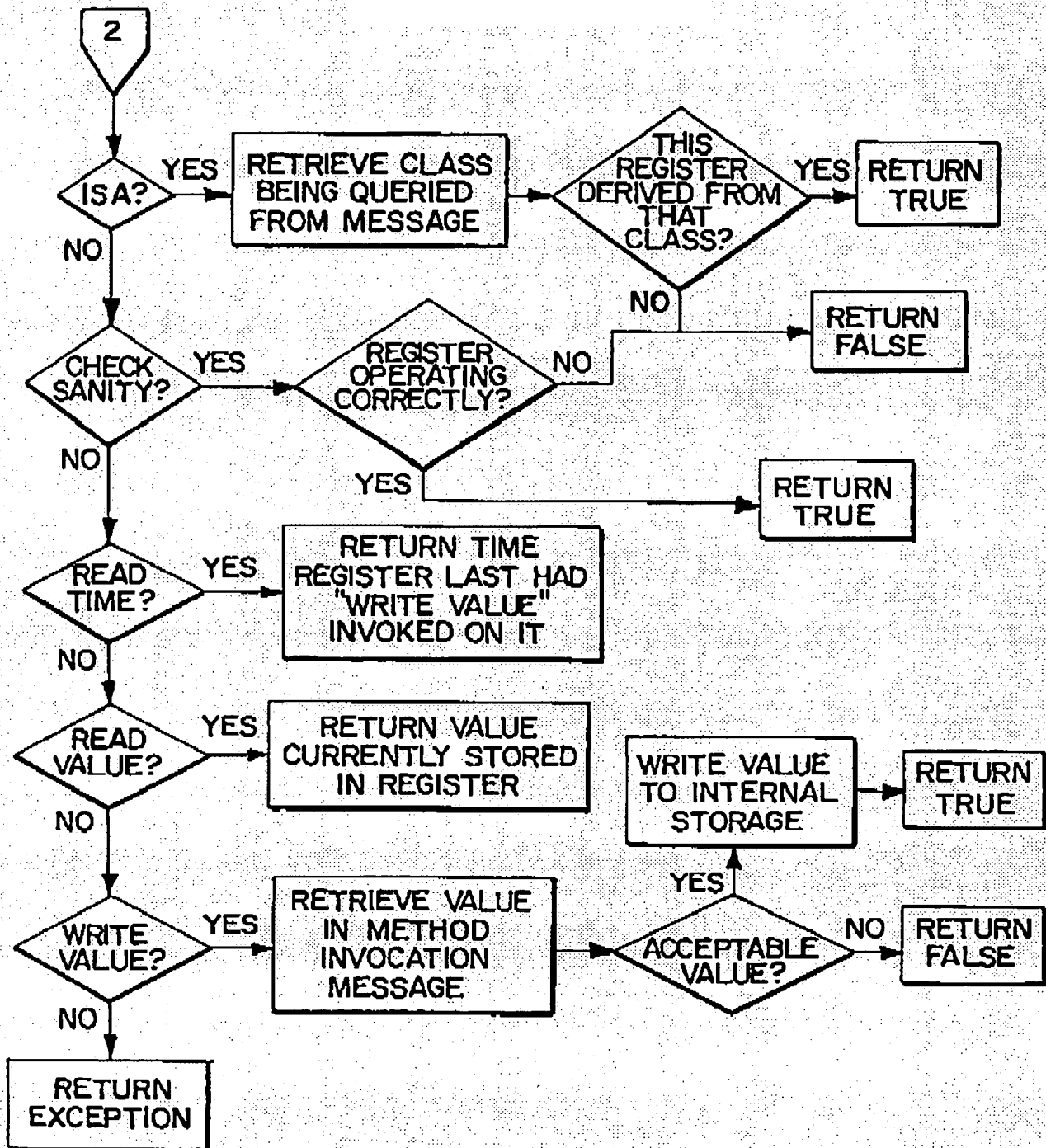


FIG. 30A

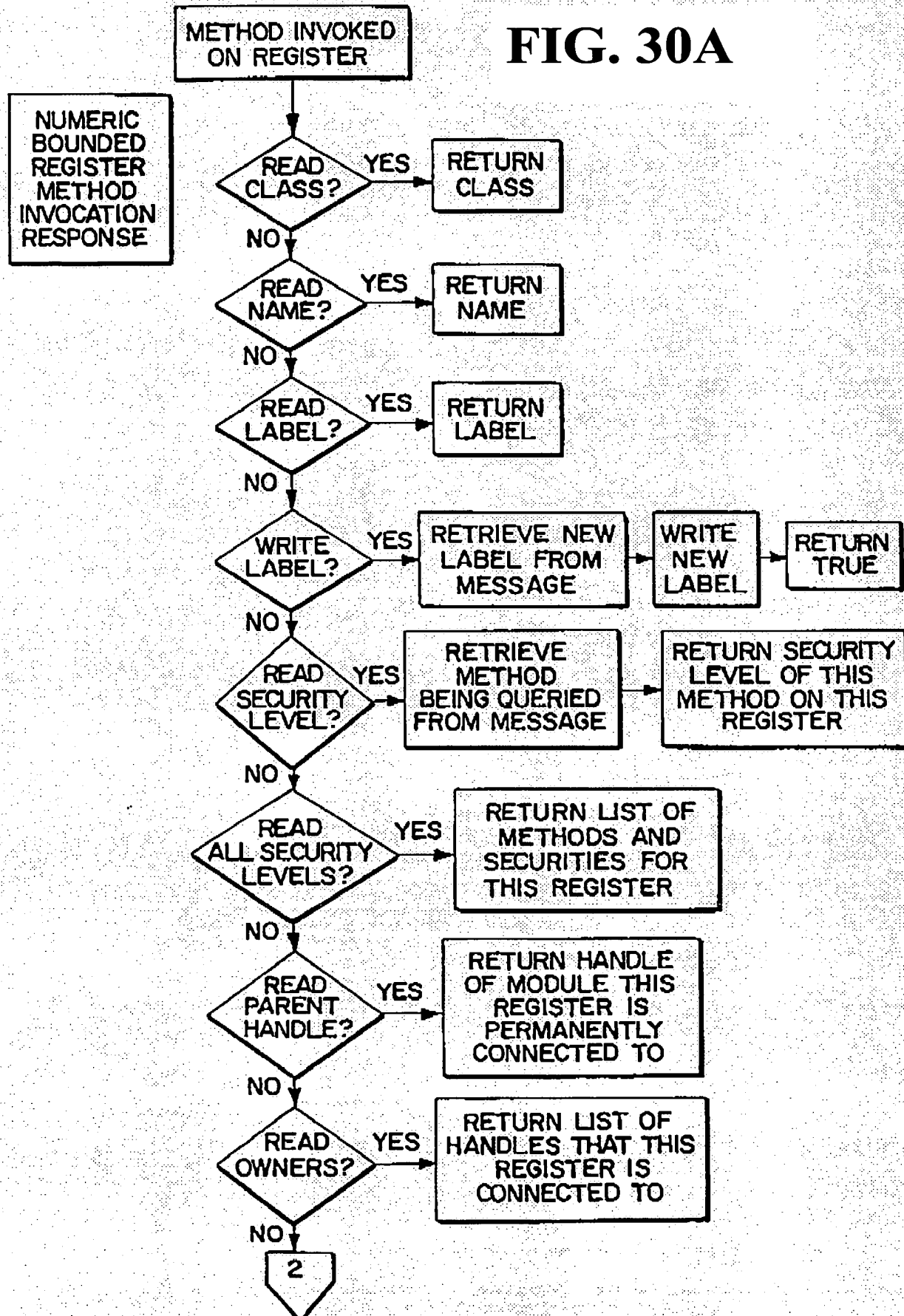


FIG. 30B

